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The Economy of North Vietnam

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THE ECONOMY OF NORTH VIETNAM

INTRODUCTION

1. This handbook is intended to serve as a ready reference for basic economic and related information on North Vietnam. The need for such a compilation has been long recognized by specialists on North Vietnam. Such a need may be even greater as Indochina moves into the postwar era and reconstruction commences. Some of the data contained herein are unclassified and are based on information released by the North Vietnamese press and radio. However, much economic information that is routinely published by the statistical bureaus of most countries of the world is held tightly by Hanoi. Thus, data presented on agriculture and many categories of industrial production are largely estimates developed from fragmentary sources.

DISCUSSION

General

2. With a per capita gross national product (GNP) of less than \$100, North Vietnam is still predominantly a backward agricultural country. Agriculture and related activities employ about 70% of the labor force and provide about one-half of the output of all goods and services.¹ Rice is the dominant crop. Industrial production, which accounts for roughly one-fifth of national output, is about evenly divided between modern and small-scale sectors.

1. Communist accounting practices result in national output figures substantially different from those of non-Communist countries. In particular, comparability is hampered by the inclusion of material production, but the omission of government and most services.

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3. Since the advent of Communist control in 1954, the regime has followed orthodox Communist economic policies, employing state ownership of productive facilities and central planning to direct resources toward a program of planned development. In agriculture, Hanoi followed the Chinese pattern of staged transformation from private ownership to a Socialist system. By mid-1964, about 85% of the 2.9 million peasant households were organized into nearly 30,000 agricultural cooperatives that farmed about 75% of the land. Since then, the number of agricultural cooperatives has been reduced to about 22,300, comprising about 95% of the peasantry, by increasing the average size of individual cooperatives. The government plans further consolidation of cooperatives in the Red River Delta and highlands.

4. Hanoi appears to have received conflicting advice on development strategy from the USSR and the People's Republic of China since 1959. The USSR recommended a program that would maximize output of those products—minerals and tropical agricultural goods—in which North Vietnam has a relative economic advantage. Other requirements were to be met through external trade. The Chinese apparently disparaged the Soviet program as “imperialist” and advocated a greater degree of self-reliance based on well-rounded industrialization. Hanoi's first five-year plan in 1961 represented an attempt to incorporate parts of both philosophies.

5. The North Vietnamese economy developed fairly rapidly in the decade following the 1954 Geneva accords. Reconstruction of damage resulting from the French—Viet Minh conflict was largely completed by the late 1950s. Construction of a number of modern plants greatly increased industrial output. Agriculture made good progress until the start of the 1960s, when stagnation began to set in because of poor weather conditions, managerial shortcomings, and peasant disaffection.

6. Since 1965 the drain of war and the destruction from two bombing campaigns have caused declines in output, and GNP remains below its earlier peak. Farm output suffered from adverse weather in several years, manpower strains, and the war's competition for scarce resources. A large part of modern industry was rendered inoperative either from physical bomb damage or indirect effects, such as lack of raw materials, shortage of electricity, or transportation bottlenecks. To a lesser degree, these same shortages hindered production in both local and handicraft enterprises. Further disruption ensued from the government's program to evacuate the urban population and to disperse small industrial facilities to safe areas in the countryside. Production shortfalls across the board required large increases in imports, especially of foodstuffs and fertilizer, and exports fell off sharply.

7. Reconstruction from the effects of the 1965-68 bombing was essentially completed when Hanoi launched its military offensive in March 1972. There followed a renewed, even more intensive, bombing campaign coupled with the mining of North Vietnam's main ports. As a result, Hanoi is once again confronted with the need to rebuild its economy and move on toward economic development, a plan already deferred seven years.

Population and Labor Force

8. North Vietnam's population is slightly more than 20 million persons and has been growing at about 2% per year. This relatively low rate for a less developed country is due to the large numbers of men sent to South Vietnam and to high wartime death rates since 1965. Population growth, births, and deaths for the past decade are shown in the accompanying chart, Figure 1.

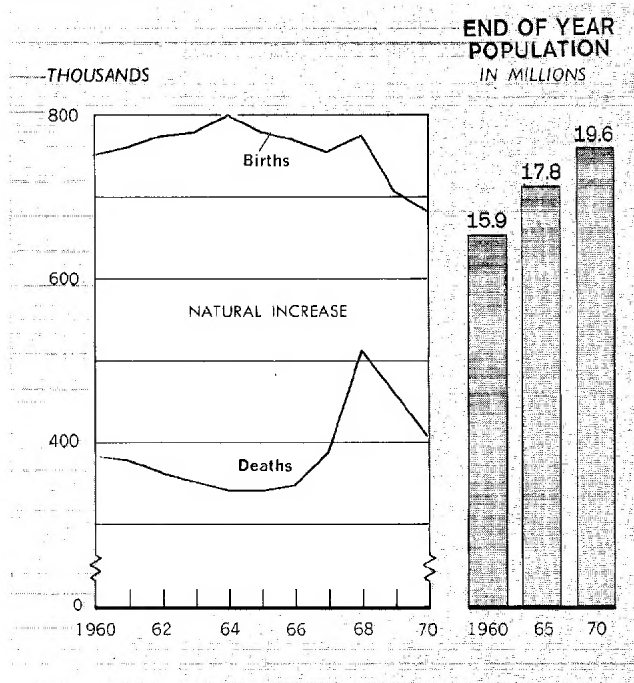
9. Overall population density in North Vietnam is about 325 persons per square mile, the highest national figure in Southeast Asia except for Singapore. The Red River Delta, parts of which have a density of some 1,500 persons per square mile, has the heaviest concentration of population. The narrow coastal strip extending to the southern border is also densely settled. Although the mountains and heavily forested northern interior regions comprise nearly two-thirds of the country, they contain barely 10% of the total population. Hanoi and Haiphong are the principal urban centers, and no more than a dozen other cities have significant populations, as shown on the map, Figure 2.

10. As in other less developed countries in Asia, a large proportion of the population is under 15 years of age. Life expectancy at birth is about 47 years. The accompanying chart compares the age-sex distribution of 1960 with that of 1970 and shows the distortion caused by the war in the prime age group. During this period the percentage of males aged 15-39 decreased from 42.6% to 36.3%, and females of the same age group decreased from 42.9% to 39.2%. All other age groups increased.

11. Manpower resources in North Vietnam have been subjected to unusual demands, but the country has managed to maintain essential economic and defense functions. Since 1965, military inductions are estimated to have withdrawn more than 1 million men from the civilian labor force, and the regime has had to mobilize the entire population in support of the war effort. This has markedly changed the civilian employment pattern and increased the workload of women, particularly in rural areas. Relocations of manpower resulted in a decline in productivity and further aggravated a longstanding shortage of skilled labor. An estimated 10 million people, or almost 50% of the total population, made up the active civilian labor force at the end of 1971, as shown in Table 1.

Estimated Population Growth

Figure 1



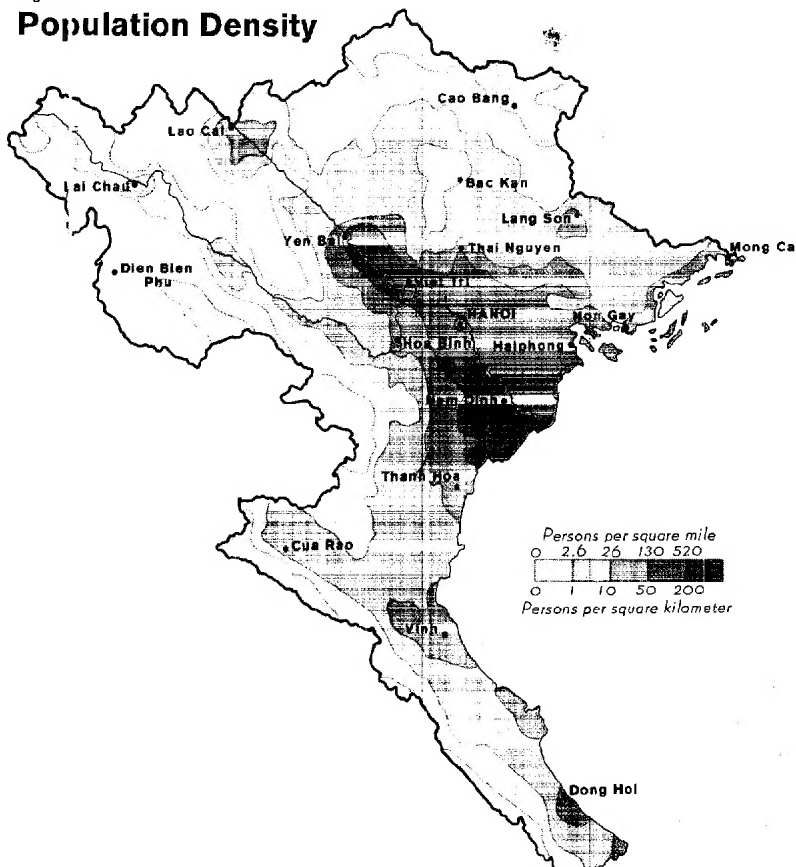
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Land and Resource Base

12. With a total land area of 61,300 square miles, North Vietnam is somewhat smaller in size than the state of Washington. Two-thirds of the country consists of rugged, sparsely-populated mountains and hills covered with dense evergreen forest interspersed with fairly extensive grassy areas. Arable land comprises only some 14% of the total, as shown in the chart, Figure 4.

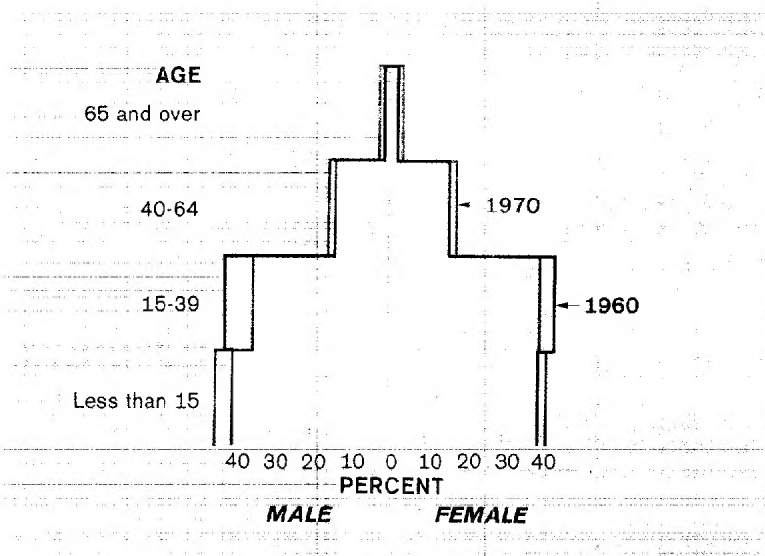
13. Agriculture is concentrated in the one-third of the country composed of the Red River Delta and the coastal plains. This area contains about 90% of the population and about 80% of the cultivated land. The Delta is a flat plain crisscrossed by rivers and drainage and irrigation canals, interwoven into a vast mosaic of rice-fields. Viet Tri, at the head of the Delta, 100 miles inland, is only 43 feet above sea level, and the average slope of the Delta to the sea is less than 6 inches per mile. In this flat environment, dikes are essential to protect the land from flooding by the rivers that cross it. Primary

Figure 2
Population Density



Population Distribution, by Age and Sex

Figure 3

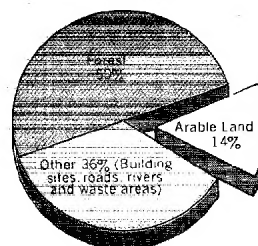
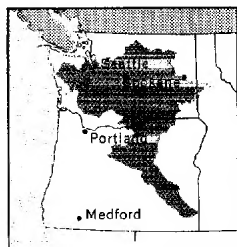


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Table 1
Population and Labor Force
1 January 1972

	<i>Million Persons</i>
Total	20.1
Males	9.5
Females	10.6
Ages 15-64	11.1
Civilian labor	10.0
Students (over age 15)	0.2
Military service	0.6

Land Use, 1963 Figure 4

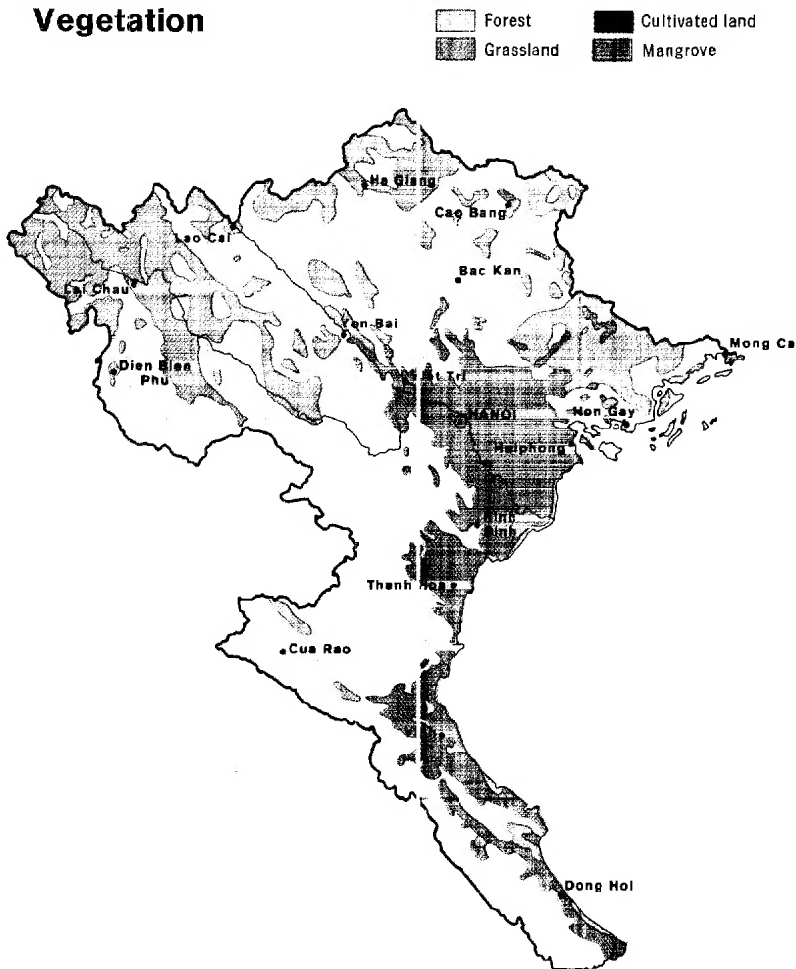


dikes protecting Hanoi and areas upstream rise up to 50 feet above the adjacent land. Secondary dike systems rising up to 40 feet are designed to contain floods if the primary dikes are breached. Poor drainage in the Delta, combined with a monsoon climate, produces some degree of flooding each summer. When monsoon rains are unusually heavy and typhoons severe, destructive flooding can occur. Floods that struck in 1971 were claimed by Hanoi to have been the worst of this century and to have inundated large areas in the Delta. (For principal vegetation types, see Figure 5.)

14. Coal is the major mineral resource and traditionally the largest single earner of foreign exchange. Proven coal reserves are about 500 million tons,² most of which lie in the Hon Gay-Cam Pha coalfields. Estimates of total possible reserves run as high as 5 billion tons. More than 95% of coal output is anthracite, however, and North Vietnam must import

2. Unless otherwise indicated, tonnages are expressed in metric tons.

Figure 5
Vegetation



most bituminous coking coal. In addition to coal, North Vietnam has such other mineral resources as iron ore deposits near Thai Nguyen with reserves—nearly all high-grade ore—estimated at about 150 million tons; apatite deposits in the Lao Cai area; and several scattered deposits of phosphorite for fertilizer production and of limestone and clay for cement production. There are also smaller deposits of chromite, tin, zinc, and tungsten, but of these only the Thanh Hoa chromite and Cao Bang tin deposits are actively mined. North Vietnam has no proved reserves of petroleum, although exploration

with Romanian assistance has been under way for several years, mainly in Thai Binh Province. Despite abundant forest resources, extraction of timber is poorly developed, and annual imports are necessary to cover domestic needs.

Transportation

15. Transportation facilities in North Vietnam—poorly developed by Western standards—are adequate to support the limited demands of the economy. Hanoi is the focal point for all types of transport. Maritime commerce is centered at the port of Haiphong. Railroads are the primary long-distance land carrier of passengers and freight, both domestically and internationally. Highways serve mainly as short-haul feeders to the railroads and to water transport and provide access to remote regions. Inland waterways, which carry primarily bulk cargoes, are the chief means of transport in the Red River Delta,

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as shown on the map, Figure 6, and, on a tonnage basis, carry more cargo than any other mode. The country's small merchant marine is engaged primarily in coastal trade but only nominally in international shipping. The relative importance of various modes of transport is shown below in cargo movements for 1966, the latest year for which statistics are available:

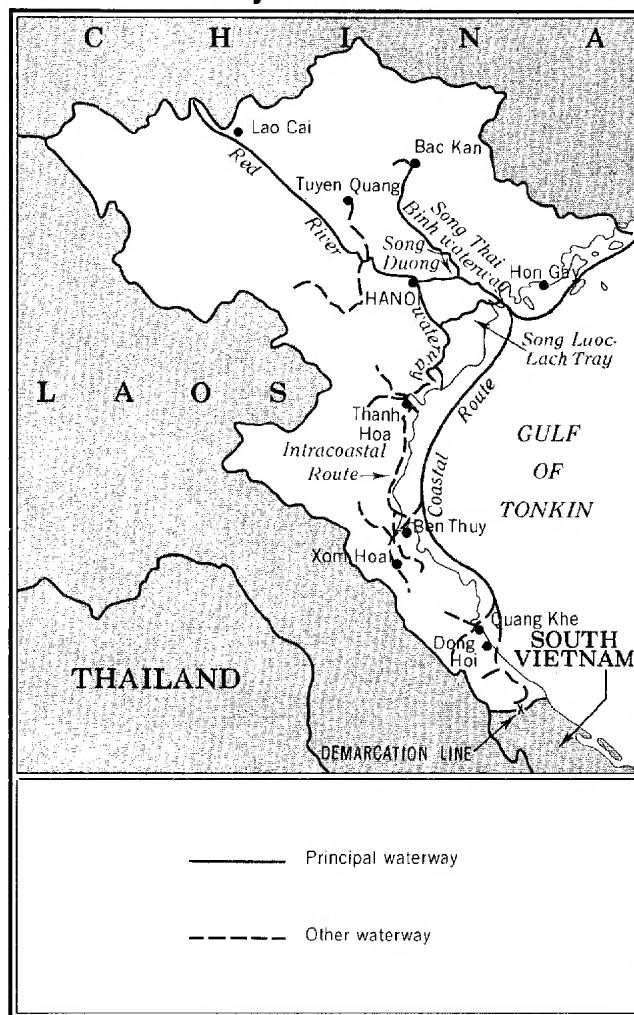
	Million Short Tons	Percent of Total	Million Ton-Miles	Percent of Total
Railroad	3.60	16	424.6	39
Highway	8.70	39	136.9	12
Inland waterway	9.30	42	404.1	37
Coastal shipping	0.55	3	130.1	12

16. Transportation links most parts of the country but is relatively limited in extent. The railroad system totals more than 600 miles, all single track and none electrified. The highway network consists of about 8,400 miles of motorable roads, plus about 2,100 miles of seasonally motorable roads. Some 800 to 900 miles of roads have bituminous-treated surfaces, and the remaining motorable roads have crushed-stone, gravel, or earth surfaces. North Vietnam's merchant marine consists of six dry cargo ships and five tankers, most of which were built in the period of 1956-66, as shown in Table 2.

17. North Vietnam's most important international connections are by sea, through the main port of Haiphong. Seaborne shipping in 1971 accounted for roughly 90% of total imports. Oceangoing vessels could call at two secondary ports-Hon Gay and Cam Pha-both of which have engaged almost exclusively in handling coal for export. Ships must lighter at the port of Vinh, as there are no docking facilities for oceangoing vessels. There are two important rail connections with China: one at Dong Dang in the northeast and another at Lao Cai in the northwest. Some dozen highways also cross the border with China.

Selected Waterway Routes

Figure 6



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Table 2
Merchant Marine

<i>Name</i>	<i>Type</i>	<i>Gross Register Tons</i>	<i>Deadweight Tons</i>	<i>Engine Type</i>	<i>Speed (Knots)</i>	<i>Location and Date of Building</i>	<i>Call Sign</i>
Ben Thuy	Dry cargo	1,662	2,520	Diesel	11.2	Japan, 1958	82VN
Cuu Long	Tanker	1,769	1,620	Diesel	14.0	USSR, 1966	N.A.
Pei Hua	Tanker	304	300	Diesel	10.0	East Germany, 1962	N.A.
Hoa Binh	Dry cargo	610	908	Diesel	10.2	Poland, 1956	84VN
Hoang Pho	Tanker	3,327	2,300	Diesel	10.0	United States, 1943	N.A.
Huu Nghi	Dry cargo	610	908	Diesel	10.2	Poland, 1956	81VN
Thong Nhat	Dry cargo	617	840	Diesel	10.0	East Germany, 1960	86VN
Tram Giang	Tanker	3,327	2,300	Diesel	10.0	United States, 1943	N.A.
20 Thang 7	Dry cargo	1,300	1,700	Diesel	N.A.	North Vietnam, 1966	N.A.
Viet Bao	Dry cargo	2,747	3,952	Turbine/oil	12.3	East Germany, 1957	89VN
Viet Trung	Tanker	250	300	Diesel	10.0	China, 1959	N.A.

In the south, a former rail connection across the demilitarized zone (DMZ) into South Vietnam has been out of service since the early 1960s, when about 100 miles of rails were removed. However, there are several road connections built through the DMZ for military resupply purposes.

18. North Vietnam's transportation system has borne the brunt of air strikes. Damage to bridges and rail yards forced widespread use of trucks for shuttling around interdicted points, and the North Vietnamese developed considerable redundancy in road networks and river crossings, especially in the country's southern reaches. Recent mining of the ports caused a shift from predominantly seaborne shipment of imports to overland transport out of staging bases in China. A petroleum pipeline, built initially to serve military forces in Laos, was extended northward to the Chinese border during 1972.

Agriculture and Food Supply

19. Agriculture, the mainstay of North Vietnam's economy, is based primarily on rice cultivation. About 70% of cultivated acreage is in rice, 20% in secondary crops (mostly corn, sweet potatoes, and manioc), and 10% in industrial and miscellaneous crops (such as cotton, tobacco, sugar, and oilseeds). The spring harvest, which is heavily dependent on irrigation, accounts for about one-third of the yearly rice crop and for practically all other crops. The larger rice crop is harvested in the autumn. Fishing, the major source of the small amount of animal protein in the Vietnamese diet, is done by peasants in the numerous lakes and streams and by commercial fishermen in coastal waters. The annual catch is probably some 200,000 tons. Over the longer term, the regime looks to the agricultural sector not only for self-sufficiency in food but also as a source of labor and capital for furthering North Vietnam's industrialization.

20. Food production increased during the first few years of Communist rule to a peak of some 3.9 million tons in 1959.³ During much of the 1960s, however, production declined (see Table 3). Weather conditions during seven out of the last ten years was average to poor. In addition, managerial shortcomings and peasant disaffection with the cooperative system contributed to the decline in output. Since 1965, increasing amounts of food have had to be imported to maintain the average monthly foodgrain ration of 13-14 kilograms per person. By 1969, rice production had begun to recover with the introduction of high-yield rice varieties, which accounted for nearly two-thirds of the spring rice crop and 10%-15% of the autumn crop in 1971 and 1972. Agricultural production was dealt a severe setback in 1971 by late-summer floods that--according to a press statement--destroyed at least one-third of the autumn rice crop. Lingering flood damage also probably had a deleterious effect on 1972 production.

21. The war's competition for resources has limited opportunities for increased mechanization, fertilizer usage, and irrigation projects. The withdrawal of men for military service and support activities has led to a shortage of trained cadre and a shift from male to female and child farm labor. Moreover, the war has forced concentration on the production of food crops on existing farmland at the expense of industrial and export crops, fishing, and opening of new lands.

3. Measured in terms of milled rice and secondary crops expressed in milled rice equivalents.

Table 3
Estimated Production of Food Crops

	<i>Million Metric Tons</i>		
	<i>Total</i>	<i>Rice^a</i>	<i>Secondary Crops^b</i>
1959	3.9	3.5	0.4
1960	3.2	2.8	0.4
1961	3.7	3.1	0.6
1962	3.6	3.0	0.6
1963	3.5	2.9	0.6
1964	3.7	3.0	0.7
1965	3.8	3.1	0.7
1966	3.5	2.8	0.7
1967	3.6	2.8	0.8
1968	3.3	2.6	0.7
1969	3.4	2.7	0.7
1970	3.6	3.0	0.6
1971	3.0-3.1	2.4-2.5	0.6
1972	3.6	3.0	0.6

a. Milled or polished rice.

b. Corn, sweet potatoes, and manioc expressed in milled rice equivalents.

22. North Vietnam has been relatively less successful in promoting food self-sufficiency than South Vietnam. Historically, North Vietnam's greater population pressures, severe constraints on both the quantity and quality of cultivable land, and limited amount of agricultural investment have given South Vietnam a comparative advantage in the production of rice, the major foodstuff. Not only has South Vietnam been able to increase total rice production by developing new lands—as the security situation permits—but has also increased farm productivity more rapidly than the North. Rice yields in both countries before the war were about 2 tons per hectare. Since then, the successful application of high-yield rice varieties and the development of a program of mechanization, irrigation, fertilization, and weed and pest control needed to maximize the output of the newer rice strains have pushed average yields in South Vietnam to almost 2.5 tons per hectare. In the North, on the other hand, the physical and institutional factors limiting output have been compounded by the degrading effects of years of war and have effectively halted agricultural development. Despite the recent introduction of high-yield varieties in North Vietnam, average yields have stagnated in the range of 1.8-2.0 tons per hectare.

Industry

23. North Vietnam's industry consists of some large modern plants that are managed by the state and of small factories and handicraft enterprises that are largely managed locally with assistance and direction from state planners. Mining enterprises and the large electric power, metal, machinery, and textile plants are centrally run. Most finished consumer goods are locally produced. Handicraft workshops form an important part of local industry, typically producing textile products, metal products, or light consumer goods. Modern and local industrial output were about equal in overall value of production before US bombing greatly reduced output in the largest plants. Industrial employment is nearly 1 million, of which more than 600,000 are employed in local industry and handicrafts.

24. The prospect of rapid industrial growth from increased investment in the early 1960s has been only partly realized. According to official data, the gross value of industrial production increased about 70% from 1960 to 1964, or an average annual increase of 14%. Further growth was in the offing as a substantial portion of industrial capacity had yet to be fully assimilated into the economy. In 1965, industrial output reached a peak, although the rate of increase dropped sharply to an estimated 1% or 2%—probably the result of the US bombing program which began that year. Output then began a decline to a low in 1967 estimated at about two-thirds the 1965 level. Slow recovery began in 1968, following the partial bombing halt in March and the termination of bombing in November. By late 1971, total industrial output probably had recovered essentially to the 1965 peak.

25. Bombing during 1965-68 and again in 1972 was targeted against the modern industrial sector, including particularly the electric power industry. The impact of bombing in 1972 has again caused a sharp decline in industrial output. Recovery to pre-bombing levels of production will take several years, as was the case in the post-1968 bombing era. Table 4 presents estimated output from a few selected branches from 1965 to 1971.

26. North Vietnam's modern industry prior to the renewal of bombing in 1972 included:

- (1) electric generating capacity of some 300,000 kilowatts, with about a dozen powerplants in the Hanoi-Haiphong network making up the only integrated segment;
- (2) one cement plant at Haiphong with an annual capacity of 630,000 tons and several minor additional plants;
- (3) one superphosphate plant at Phu Tho rated at 120,000 tons per year plus three small plants producing about 50,000 tons of molten phosphorus fertilizer;
- (4) two textile mills, one in Nam Dinh and one in Hanoi, capable of producing 100 million linear meters of cotton textiles;

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(5) coal mining, with a recorded annual output of 4 million tons of anthracite coal in 1965;

(6) one chemical plant at Viet Tri producing small amounts of chlorine, caustic soda, insecticides, and polyvinyl chloride;

(7) three significant machine building plants that produce obsolete lathes, drill presses, small diesel engines, and simple agricultural machinery; and

(8) a group of electrical equipment plants capable of producing insulators, switch gear, and small electric motors and transformers.

The partially completed steel complex at Thai Nguyen, with a planned output of 300,000 tons of pig iron and 500,000 tons of crude steel, has been limited to pig iron production. A fertilizer plant at Bac Giang designed to produce about 200,000 tons of ammonium nitrate, using coal as a charge stock, has not yet been completed because of the war.

Table 4

Estimated Output for Selected Branches of Industry

	1965	1966	1967	1968	1969	1970	1971
<i>Million kilowatt hours</i>							
Electric power	570	520	300	350	450	510	560
<i>Thousand metric tons</i>							
Coal	4,000	3,600	2,500	2,800	2,800	2,900	3,600
Cement	660	665	200	120	200	250	345
Apatite	853	350	200	250	250	350	400
Iron ore	400	300	80	30	30	100	150
Pig iron	200	150	40	15	15	50	75

Foreign Trade and Aid

27. Since 1954, North Vietnam has incurred continuous trade deficits that began to increase rapidly after 1964. Credits and grants from the Communist countries have financed the deficits, although Hanoi has been able to maintain a small surplus in its trade with the non-Communist countries. The non-Communist countries, however, account for only a small part of total trade, while the Communist countries provide more than 95% of Hanoi's imports and take more than 70% of its exports. Table 5 shows trends

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in the trade balance but understates total imports because grant aid is not included in the data. These figures probably represent about one-half of total imports, with grant aid spread proportionately among the Communist donors.

28. Because the USSR is North Vietnam's largest trading partner, commercial patterns with the USSR—as shown in Table 6—probably typify import-export trends in both composition and fluctuations over time. Import requirements since 1965 have risen sharply as a result of war-induced demands and shortfalls in domestic production. North Vietnam depends on imports for all its supplies of petroleum, finished steel, railroad rolling stock, and vehicles, and for most of its complex machinery, metal manufactures, spare parts, industrial chemicals, and raw cotton. In addition, the strains of war and population growth have resulted in substantial demand for foodstuff imports to supplement domestic production.

29. More than one-half of Hanoi's exports by value traditionally have been agricultural products, handicrafts, and light manufactures (clothing and footwear); the remainder is made up of minerals, metals, and building materials (mainly coal, apatite, pig iron, and cement). Items such as coal, pig iron, and cement have been important sources of hard currency earnings in trade with non-Communist countries, particularly in East Asia. Coal remains Hanoi's dominant export item to Japan, although total coal exports in 1971 were still less than one-half the prewar peak. Pig iron, apatite, and cement exports also remain well below previous levels.

Table 5

North Vietnam: Direction of Trade¹

Million US \$

	1965		1966		1967		1968		1969		1970		1971	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
Total ²	180	110	250	85	365	65	415	60	435	50	385	65	360	75
Communist ²	165	81	231	62	360	55	409	47	425	37	377	49	355	53
USSR	75	31	68	25	148	21	159	18	189	17	185	18	155	24
Eastern Europe	30	26	65	17	106	12	125	13	134	10	102	15	75	19
Bulgaria	2.4	1.5	5.2	1.1	8.3	0.6	6.4	0.8	7.9	0.5	9.6	1.5	N.A.	N.A.
Czechoslovakia	9.7	7.2	13.8	5.5	17.2	3.3	18.5	4.0	16.5	3.2	13.2	5.8	18	7
East Germany	4.9	6.1	16.5	5.0	30.1	4.2	37.1	5.0	57.0	2.6	37.0	4.0	23	9
Hungary	5.3	3.7	9.7	1.5	15.3	1.1	21.4	0.9	19.7	0.7	17.2	0.7	16	1
Poland	4.0	5.1	10.5	3.7	15.8	2.5	24.1	2.5	20.8	2.8	14.5	2.3	12	2
Romania	3.4	2.1	9.0	0.2	20.1	0.1	17.9	0.1	11.7	0.2	10.0	0.2	3	Negl.
China and other	60	30	105	20	105	20	125	15	105	10	90	15	125	10
Non-Communist ⁴	15	23	13	21	6	12	7	10	10	13	9	14	7	21
Of which:														
Japan	3.9	11.5	5.7	9.7	1.8	6.7	2.4	6.1	7.3	6.0	5.0	6.3	3.7	11.6
Singapore	2.8	1.9	1.9	1.6	1.2	1.5	1.2	1.4	0.9	2.9	0.7	3.3	0.6	2.6
Hong Kong	0.4	2.7	0.3	3.0	0.2	1.1	0.2	1.2	0.3	1.8	1.3	2.6	0.3	4.8
France	2.1	3.0	2.2	2.6	0.6	0.5	1.4	0.3	0.6	0.4	0.5	0.7	0.3	0.6

1. Totals are rounded to the nearest \$5 million; because of rounding, components may not add to the totals shown.

2. Figures are compiled from official statistics of some trading partners (the USSR, Eastern Europe, and the non-Communist countries) and estimates for others (China and other Communist countries). Estimates for China are extrapolated from prewar data which indicated that China's contribution to North Vietnam's imports fluctuated roughly between 25% and 35%, and its share of Hanoi's exports averaged about 25%.

3. The import figures understate Hanoi's receipts from the Communist countries because grant aid deliveries are excluded from the official trade statistics published by the USSR and East European countries.

4. Exports to the non-Communist countries include cost, insurance, and freight (c.i.f.).

Table 6
North Vietnam: Trade with the USSR¹

	Million US \$								
	1961	1964	1965	1966	1967	1968	1969	1970	1971
Total trade	67.0	82.5	105.5	93.5	168.6	177.1	206.2	203.5	178.7
Total imports	41.3	47.7	74.9	68.2	147.7	159.2	189.3	185.0	154.8
Machinery and equipment	19.5	25.4	48.0	45.0	89.8	79.0	103.1	79.2	58.8
Of which:									
Complete plants	11.6	18.6	32.4	33.6	43.4	29.7	34.3	28.4	....
Vehicles and spare parts	2.4	2.5	5.9	1.5	21.4	18.1	28.1	21.1	15.2
Petroleum products	2.9	4.6	5.3	3.6	9.0	13.0	14.7	13.7	14.3
Metals and metal products	6.3	5.4	7.1	3.9	14.0	10.9	11.2	14.1	13.1
Ferrous metals and products	4.6	3.9	5.3	2.7	11.5	9.2	9.5	11.8	11.4
Nonferrous metals and products	1.7	1.5	1.8	1.2	2.5	1.7	1.7	2.3	1.7
Fertilizer (nitrogenous)	2.1	1.0	1.5	1.6	1.5	2.0	1.6	4.5	5.0
Tires	0.5	0.5	0.6	0.9	2.7	2.2	4.5	3.1	2.9
Textile raw materials and intermediate products	0.8	2.7	2.8	1.1	4.0	4.0	3.8	4.0	4.0
Fabrics	0.6	2.8	3.4	1.7	5.8	6.3	6.5	9.3	9.9
Of which:									
Cotton fabrics	....	1.5	2.4	1.0	4.8	5.3	5.8	7.3	7.7
Wheat flour	1.9 ²	0.1	0.1	1.1	3.9	22.4	20.8	38.5	27.8
Other	6.7	5.2	6.1	9.3	17.0	19.4	23.1	18.6	19.0
Total exports	25.7	34.8	30.6	25.3	20.9	17.9	16.9	18.5	23.9
Wooden building materials	5.7	5.1	4.6	1.0	0.6	0.3	0.3	0.2	0.1
Jute	0.8	0.3	0.4	0.3	0.1	0.2	0.1	0.3	....
Coffee	0.1	Negl.	0.8	0.4	0.2	0.1	0.2	0.1	0.3
Tea	0.4	0.4	0.4	0.5	0.8	0.7	0.5	0.9	0.7
Bananas	0.8	1.3	1.4	0.7	0.4	0.1	0.1	0.4	0.4
Alcoholic beverages	Negl.	2.1	2.2	3.9	2.9	3.4	2.6	3.8	3.3
Clothing and linens	12.0	16.7	10.5	9.2	9.0	7.9	7.8	7.9	11.3
Footwear	0.9	2.2	2.4	2.5	1.8	1.0	1.1	0.3	1.8
Fiber matting	0.5	1.0	1.1	1.4	2.0	1.4	1.5	1.4	2.7
Other	4.5	5.7	6.8	5.4	3.1	2.8	2.7	3.2	3.3

1. Official trade statistics. These figures do not include grant aid deliveries. Rubles were converted to US dollars at the official rate of 1.11 rubles to US \$1.

2. Including rye flour and other unspecified meal.

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The Economy of North Vietnam

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December 1972

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THE ECONOMY OF NORTH VIETNAM

INTRODUCTION

1. This handbook is intended to serve as a ready reference for basic economic and related information on North Vietnam. The need for such a compilation has been long recognized by specialists on North Vietnam. Such a need may be even greater as Indochina moves into the postwar era and reconstruction commences. Some of the data contained herein are unclassified and are based on information released by the North Vietnamese press and radio. However, much economic information that is routinely published by the statistical bureaus of most countries of the world is held tightly by Hanoi. Thus, data presented on agriculture and many categories of industrial production are largely estimates developed from fragmentary sources.

DISCUSSION

General

2. With a per capita gross national product (GNP) of less than \$100, North Vietnam is still predominantly a backward agricultural country. Agriculture and related activities employ about 70% of the labor force and provide about one-half of the output of all goods and services.¹ Rice is the dominant crop. Industrial production, which accounts for roughly one-fifth of national output, is about evenly divided between modern and small-scale sectors.

1. Communist accounting practices result in national output figures substantially different from those of non-Communist countries. In particular, comparability is hampered by the inclusion of material production, but the omission of government and most services.

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3. Since the advent of Communist control in 1954, the regime has followed orthodox Communist economic policies, employing state ownership of productive facilities and central planning to direct resources toward a program of planned development. In agriculture, Hanoi followed the Chinese pattern of staged transformation from private ownership to a Socialist system. By mid-1964, about 85% of the 2.9 million peasant households were organized into nearly 30,000 agricultural cooperatives that farmed about 75% of the land. Since then, the number of agricultural cooperatives has been reduced to about 22,300, comprising about 95% of the peasantry, by increasing the average size of individual cooperatives. The government plans further consolidation of cooperatives in the Red River Delta and highlands.

4. Hanoi appears to have received conflicting advice on development strategy from the USSR and the People's Republic of China since 1959. The USSR recommended a program that would maximize output of those products—minerals and tropical agricultural goods—in which North Vietnam has a relative economic advantage. Other requirements were to be met through external trade. The Chinese apparently disparaged the Soviet program as “imperialist” and advocated a greater degree of self-reliance based on well-rounded industrialization. Hanoi's first five-year plan in 1961 represented an attempt to incorporate parts of both philosophies.

5. The North Vietnamese economy developed fairly rapidly in the decade following the 1954 Geneva accords. Reconstruction of damage resulting from the French—Viet Minh conflict was largely completed by the late 1950s. Construction of a number of modern plants greatly increased industrial output. Agriculture made good progress until the start of the 1960s, when stagnation began to set in because of poor weather conditions, managerial shortcomings, and peasant disaffection.

6. Since 1965 the drain of war and the destruction from two bombing campaigns have caused declines in output, and GNP remains below its earlier peak. Farm output suffered from adverse weather in several years, manpower strains, and the war's competition for scarce resources. A large part of modern industry was rendered inoperative either from physical bomb damage or indirect effects, such as lack of raw materials, shortage of electricity, or transportation bottlenecks. To a lesser degree, these same shortages hindered production in both local and handicraft enterprises. Further disruption ensued from the government's program to evacuate the urban population and to disperse small industrial facilities to safe areas in the countryside. Production shortfalls across the board required large increases in imports, especially of foodstuffs and fertilizer, and exports fell off sharply.

7. Reconstruction from the effects of the 1965-68 bombing was essentially completed when Hanoi launched its military offensive in March 1972. There followed a renewed, even more intensive, bombing campaign coupled with the mining of North Vietnam's main ports. As a result, Hanoi is once again confronted with the need to rebuild its economy and move on toward economic development, a plan already deferred seven years.

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Population and Labor Force

8. North Vietnam's population is slightly more than 20 million persons and has been growing at about 2% per year. This relatively low rate for a less developed country is due to the large numbers of men sent to South Vietnam and to high wartime death rates since 1965. Population growth, births, and deaths for the past decade are shown in the accompanying chart, Figure 1.

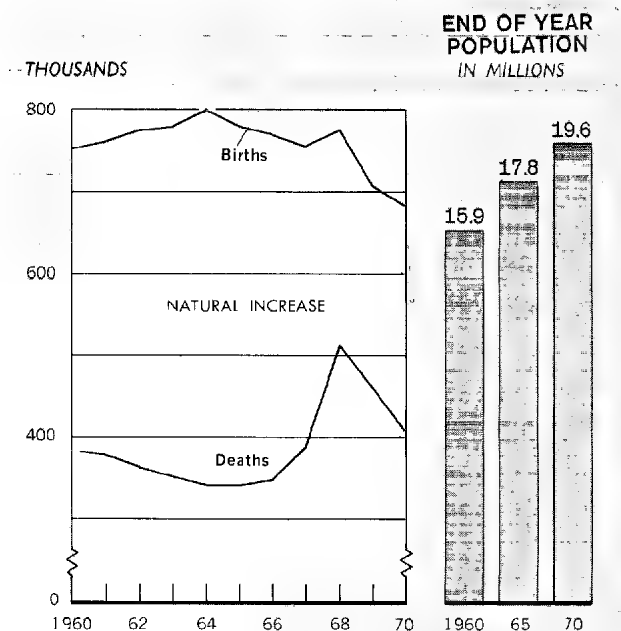
9. Overall population density in North Vietnam is about 325 persons per square mile, the highest national figure in Southeast Asia except for Singapore. The Red River Delta, parts of which have a density of some 1,500 persons per square mile, has the heaviest concentration of population. The narrow coastal strip extending to the southern border is also densely settled. Although the mountains and heavily forested northern interior regions comprise nearly two-thirds of the country, they contain barely 10% of the total population. Hanoi and Haiphong are the principal urban centers, and no more than a dozen other cities have significant populations, as shown on the map, Figure 2.

10. As in other less developed countries in Asia, a large proportion of the population is under 15 years of age. Life expectancy at birth is about 47 years. The accompanying chart compares the age-sex distribution of 1960 with that of 1970 and shows the distortion caused by the war in the prime age group. During this period the percentage of males aged 15-39 decreased from 42.6% to 36.3%, and females of the same age group decreased from 42.9% to 39.2%. All other age groups increased.

11. Manpower resources in North Vietnam have been subjected to unusual demands, but the country has managed to maintain essential economic and defense functions. Since 1965, military inductions are estimated to have withdrawn more than 1 million men from the civilian labor force, and the regime has had to mobilize the entire population in support of the war effort. This has markedly changed the civilian employment pattern and increased the workload of women, particularly in rural areas. Relocations of manpower resulted in a decline in productivity and further aggravated a longstanding shortage of skilled labor. An estimated 10 million people, or almost 50% of the total population, made up the active civilian labor force at the end of 1971, as shown in Table 1.

Estimated Population Growth

Figure 1



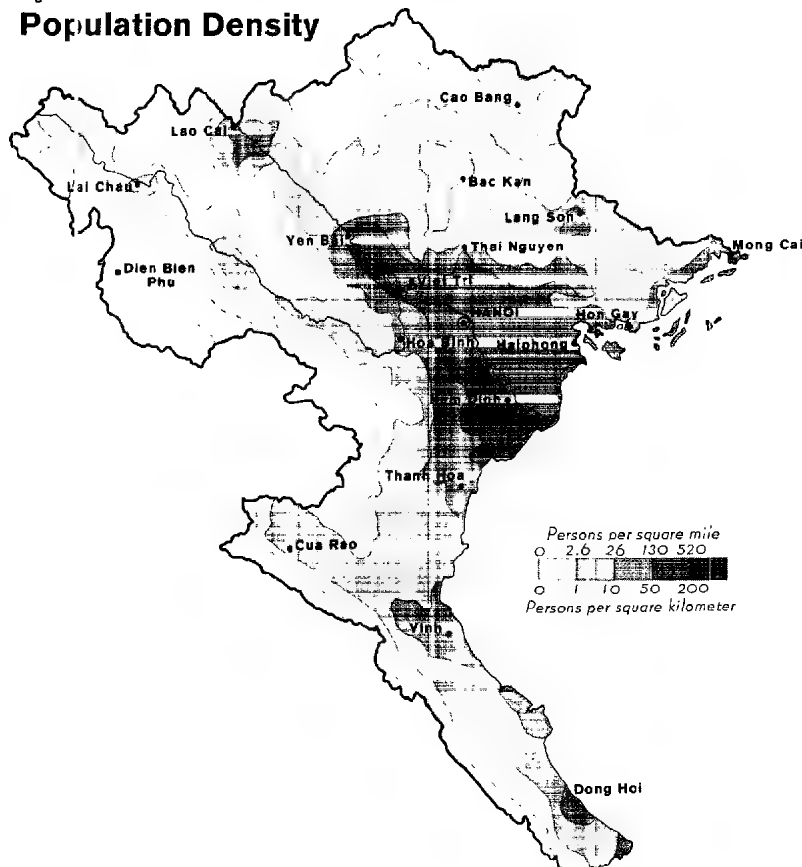
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Land and Resource Base

12. With a total land area of 61,300 square miles, North Vietnam is somewhat smaller in size than the state of Washington. Two-thirds of the country consists of rugged, sparsely-populated mountains and hills covered with dense evergreen forest interspersed with fairly extensive grassy areas. Arable land comprises only some 14% of the total, as shown in the chart, Figure 4.

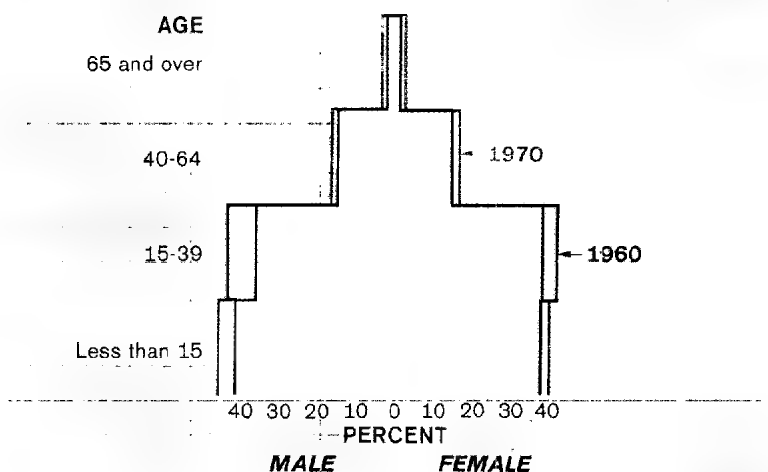
13. Agriculture is concentrated in the one-third of the country composed of the Red River Delta and the coastal plains. This area contains about 90% of the population and about 80% of the cultivated land. The Delta is a flat plain crisscrossed by rivers and drainage and irrigation canals, interwoven into a vast mosaic of rice-fields. Viet Tri, at the head of the Delta, 100 miles inland, is only 43 feet above sea level, and the average slope of the Delta to the sea is less than 6 inches per mile. In this flat environment, dikes are essential to protect the land from flooding by the rivers that cross it. Primary

Figure 2
Population Density



Population Distribution, by Age and Sex

Figure 3



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Table 1
Population and Labor Force
1 January 1972

	<i>Million Persons</i>
Total	20.1
Males	9.5
Females	10.6
Ages 15-64	11.1
Civilian labor	10.0
Students (over age 15)	0.2
Military service	0.6

Land Use, 1963 Figure 4



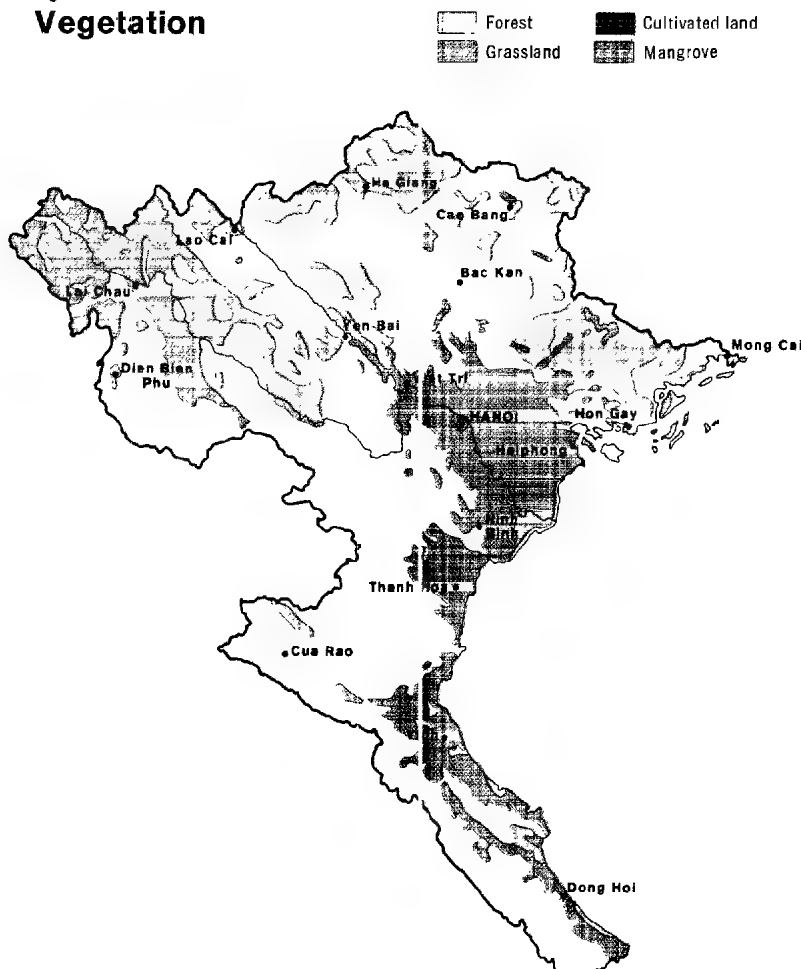
dikes protecting Hanoi and areas upstream rise up to 50 feet above the adjacent land. Secondary dike systems rising up to 40 feet are designed to contain floods if the primary dikes are breached. Poor drainage in the Delta, combined with a monsoon climate, produces some degree of flooding each summer. When monsoon rains are unusually heavy and typhoons severe, destructive flooding can occur. Floods that struck in 1971 were claimed by Hanoi to have been the worst of this century and to have inundated large areas in the Delta. (For principal vegetation types, see Figure 5.)

14. Coal is the major mineral resource and traditionally the largest single earner of foreign exchange. Proven coal reserves are about 500 million tons,² most of which lie in the Hon Gay-Cam Pha coalfields. Estimates of total possible reserves run as high as 5 billion tons. More than 95% of coal output is anthracite, however, and North Vietnam must import

2. Unless otherwise indicated, tonnages are expressed in metric tons.

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Figure 5
Vegetation



most bituminous coking coal. In addition to coal, North Vietnam has such other mineral resources as iron ore deposits near Thai Nguyen with reserves—nearly all high-grade ore—estimated at about 150 million tons; apatite deposits in the Lao Cai area; and several scattered deposits of phosphorite for fertilizer production and of limestone and clay for cement production. There are also smaller deposits of chromite, tin, zinc, and tungsten, but of these only the Thanh Hoa chromite and Cao Bang tin deposits are actively mined. North Vietnam has no proved reserves of petroleum, although exploration

with Romanian assistance has been under way for several years, mainly in Thai Binh Province. Despite abundant forest resources, extraction of timber is poorly developed, and annual imports are necessary to cover domestic needs.

Transportation

15. Transportation facilities in North Vietnam—poorly developed by Western standards—are adequate to support the limited demands of the economy. Hanoi is the focal point for all types of transport. Maritime commerce is centered at the port of Haiphong. Railroads are the primary long-distance land carrier of passengers and freight, both domestically and internationally. Highways serve mainly as short-haul feeders to the railroads and to water transport and provide access to remote regions. Inland waterways, which carry primarily bulk cargoes, are the chief means of transport in the Red River Delta,

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as shown on the map, Figure 6, and, on a tonnage basis, carry more cargo than any other mode. The country's small merchant marine is engaged primarily in coastal trade but only nominally in international shipping. The relative importance of various modes of transport is shown below in cargo movements for 1966, the latest year for which statistics are available:

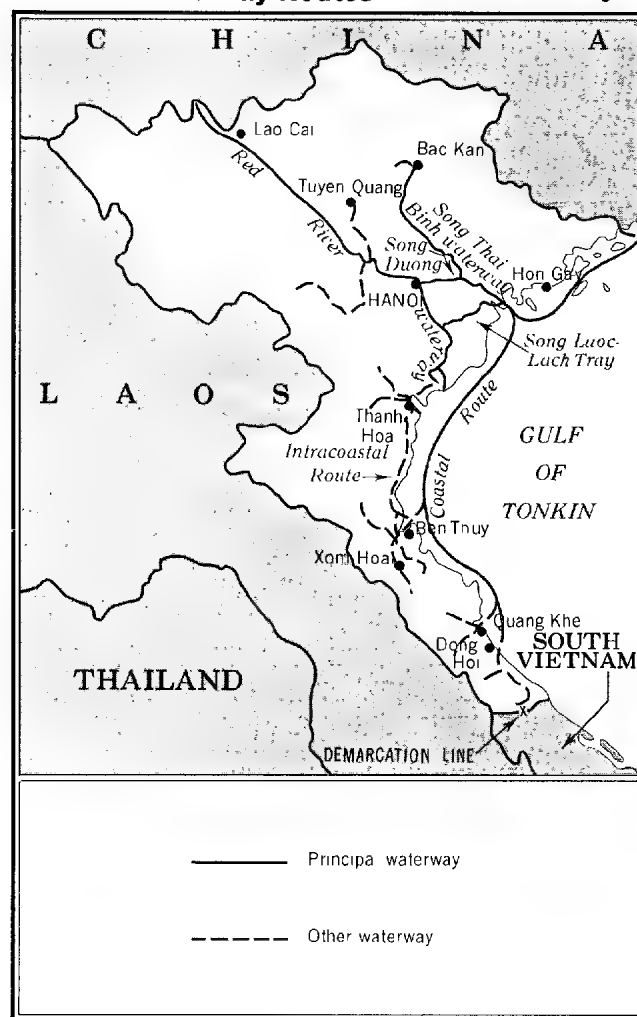
	Million Short Tons	Percent of Total	Million Ton-Miles	Percent of Total
Railroad	1.60	16	424.6	39
Highway	8.70	39	136.9	12
Inland waterway	9.30	42	404.1	37
Coastal shipping	0.55	3	130.1	12

16. Transportation links most parts of the country but is relatively limited in extent. The railroad system totals more than 600 miles, all single track and none electrified. The highway network consists of about 8,400 miles of motorable roads, plus about 2,100 miles of seasonally motorable roads. Some 800 to 900 miles of roads have bituminous-treated surfaces, and the remaining motorable roads have crushed-stone, gravel, or earth surfaces. North Vietnam's merchant marine consists of six dry cargo ships and five tankers, most of which were built in the period of 1956-66, as shown in Table 2.

17. North Vietnam's most important international connections are by sea, through the main port of Haiphong. Seaborne shipping in 1971 accounted for roughly 90% of total imports. Oceangoing vessels could call at two secondary ports-Hon Gay and Cam Pha-both of which have engaged almost exclusively in handling coal for export. Ships must lighter at the port of Vinh, as there are no docking facilities for oceangoing vessels. There are two important rail connections with China: one at Dong Dang in the northeast and another at Lao Cai in the northwest. Some dozen highways also cross the border with China.

Selected Waterway Routes

Figure 6



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Table 2

Merchant Marine

<i>Name</i>	<i>Type</i>	<i>Gross Register Tons</i>	<i>Deadweight Tons</i>	<i>Engine Type</i>	<i>Speed (Knots)</i>	<i>Location and Date of Building</i>	<i>Call Sign</i>
Ben Thuy	Dry cargo	1,662	2,520	Diesel	11.2	Japan, 1958	82VN
Cuu Long	Tanker	1,769	1,620	Diesel	14.0	USSR, 1966	N.A.
Pei Hua	Tanker	304	300	Diesel	10.0	East Germany, 1962	N.A.
Hoa Binh	Dry cargo	610	908	Diesel	10.2	Poland, 1956	84VN
Hoang Pho	Tanker	3,327	2,300	Diesel	10.0	United States, 1943	N.A.
Huu Nghi	Dry cargo	610	908	Diesel	10.2	Poland, 1956	81VN
Thong Nhat	Dry cargo	617	840	Diesel	10.0	East Germany, 1960	86VN
Tram Giang	Tanker	3,327	2,300	Diesel	10.0	United States, 1943	N.A.
20 Thang 7	Dry cargo	1,300	1,700	Diesel	N.A.	North Vietnam, 1966	N.A.
Viet Bao	Dry cargo	2,747	3,952	Turbine/oil	12.3	East Germany, 1957	89VN
Viet Trung	Tanker	250	300	Diesel	10.0	China, 1959	N.A.

In the south, a former rail connection across the demilitarized zone (DMZ) into South Vietnam has been out of service since the early 1960s, when about 100 miles of rails were removed. However, there are several road connections built through the DMZ for military resupply purposes.

18. North Vietnam's transportation system has borne the brunt of air strikes. Damage to bridges and rail yards forced widespread use of trucks for shuttling around interdicted points, and the North Vietnamese developed considerable redundancy in road networks and river crossings, especially in the country's southern reaches. Recent mining of the ports caused a shift from predominantly seaborne shipment of imports to overland transport out of staging bases in China. A petroleum pipeline, built initially to serve military forces in Laos, was extended northward to the Chinese border during 1972.

Agriculture and Food Supply

19. Agriculture, the mainstay of North Vietnam's economy, is based primarily on rice cultivation. About 70% of cultivated acreage is in rice, 20% in secondary crops (mostly corn, sweet potatoes, and manioc), and 10% in industrial and miscellaneous crops (such as cotton, tobacco, sugar, and oilseeds). The spring harvest, which is heavily dependent on irrigation, accounts for about one-third of the yearly rice crop and for practically all other crops. The larger rice crop is harvested in the autumn. Fishing, the major source of the small amount of animal protein in the Vietnamese diet, is done by peasants in the numerous lakes and streams and by commercial fishermen in coastal waters. The annual catch is probably some 200,000 tons. Over the longer term, the regime looks to the agricultural sector not only for self-sufficiency in food but also as a source of labor and capital for furthering North Vietnam's industrialization.

20. Food production increased during the first few years of Communist rule to a peak of some 3.9 million tons in 1959.³ During much of the 1960s, however, production declined (see Table 3). Weather conditions during seven out of the last ten years was average to poor. In addition, managerial shortcomings and peasant disaffection with the cooperative system contributed to the decline in output. Since 1965, increasing amounts of food have had to be imported to maintain the average monthly foodgrain ration of 13-14 kilograms per person. By 1969, rice production had begun to recover with the introduction of high-yield rice varieties, which accounted for nearly two-thirds of the spring rice crop and 10%-15% of the autumn crop in 1971 and 1972. Agricultural production was dealt a severe setback in 1971 by late-summer floods that--according to a press statement--destroyed at least one-third of the autumn rice crop. Lingering flood damage also probably had a deleterious effect on 1972 production.

21. The war's competition for resources has limited opportunities for increased mechanization, fertilizer usage, and irrigation projects. The withdrawal of men for military service and support activities has led to a shortage of trained cadre and a shift from male to female and child farm labor. Moreover, the war has forced concentration on the production of food crops on existing farmland at the expense of industrial and export crops, fishing, and opening of new lands.

3. Measured in terms of milled rice and secondary crops expressed in milled rice equivalents.

Table 3
Estimated Production of Food Crops

	<i>Million Metric Tons</i>		
	<i>Total</i>	<i>Rice^a</i>	<i>Secondary Crops^b</i>
1959	3.9	3.5	0.4
1960	3.2	2.8	0.4
1961	3.7	3.1	0.6
1962	3.6	3.0	0.6
1963	3.5	2.9	0.6
1964	3.7	3.0	0.7
1965	3.8	3.1	0.7
1966	3.5	2.8	0.7
1967	3.6	2.8	0.8
1968	3.3	2.6	0.7
1969	3.4	2.7	0.7
1970	3.6	3.0	0.6
1971	3.0-3.1	2.4-2.5	0.6
1972	3.6	3.0	0.6

a. Milled or polished rice.

b. Corn, sweet potatoes, and manioc expressed in milled rice equivalents.

22. North Vietnam has been relatively less successful in promoting food self-sufficiency than South Vietnam. Historically, North Vietnam's greater population pressures, severe constraints on both the quantity and quality of cultivable land, and limited amount of agricultural investment have given South Vietnam a comparative advantage in the production of rice, the major foodstuff. Not only has South Vietnam been able to increase total rice production by developing new lands as the security situation permits—but has also increased farm productivity more rapidly than the North. Rice yields in both countries before the war were about 2 tons per hectare. Since then, the successful application of high-yield rice varieties and the development of a program of mechanization, irrigation, fertilization, and weed and pest control needed to maximize the output of the newer rice strains have pushed average yields in South Vietnam to almost 2.5 tons per hectare. In the North, on the other hand, the physical and institutional factors limiting output have been compounded by the degrading effects of years of war and have effectively halted agricultural development. Despite the recent introduction of high-yield varieties in North Vietnam, average yields have stagnated in the range of 1.8-2.0 tons per hectare.

Industry

23. North Vietnam's industry consists of some large modern plants that are managed by the state and of small factories and handicraft enterprises that are largely managed locally with assistance and direction from state planners. Mining enterprises and the large electric power, metal, machinery, and textile plants are centrally run. Most finished consumer goods are locally produced. Handicraft workshops form an important part of local industry, typically producing textile products, metal products, or light consumer goods. Modern and local industrial output were about equal in overall value of production before US bombing greatly reduced output in the largest plants. Industrial employment is nearly 1 million, of which more than 600,000 are employed in local industry and handicrafts.

24. The prospect of rapid industrial growth from increased investment in the early 1960s has been only partly realized. According to official data, the gross value of industrial production increased about 70% from 1960 to 1964, or an average annual increase of 14%. Further growth was in the offing as a substantial portion of industrial capacity had yet to be fully assimilated into the economy. In 1965, industrial output reached a peak, although the rate of increase dropped sharply to an estimated 1% or 2%—probably the result of the US bombing program which began that year. Output then began a decline to a low in 1967 estimated at about two-thirds the 1965 level. Slow recovery began in 1968, following the partial bombing halt in March and the termination of bombing in November. By late 1971, total industrial output probably had recovered essentially to the 1965 peak.

25. Bombing during 1965-68 and again in 1972 was targeted against the modern industrial sector, including particularly the electric power industry. The impact of bombing in 1972 has again caused a sharp decline in industrial output. Recovery to pre-bombing levels of production will take several years, as was the case in the post-1968 bombing era. Table 4 presents estimated output from a few selected branches from 1965 to 1971.

26. North Vietnam's modern industry prior to the renewal of bombing in 1972 included:

- (1) electric generating capacity of some 300,000 kilowatts, with about a dozen powerplants in the Hanoi-Haiphong network making up the only integrated segment;
- (2) one cement plant at Haiphong with an annual capacity of 630,000 tons and several minor additional plants;
- (3) one superphosphate plant at Phu Tho rated at 120,000 tons per year plus three small plants producing about 50,000 tons of molten phosphorus fertilizer;
- (4) two textile mills, one in Nam Dinh and one in Hanoi, capable of producing 100 million linear meters of cotton textiles;

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(5) coal mining, with a recorded annual output of 4 million tons of anthracite coal in 1965;

(6) one chemical plant at Viet Tri producing small amounts of chlorine, caustic soda, insecticides, and polyvinyl chloride;

(7) three significant machine building plants that produce obsolete lathes, drill presses, small diesel engines, and simple agricultural machinery; and

(8) a group of electrical equipment plants capable of producing insulators, switch gear, and small electric motors and transformers.

The partially completed steel complex at Thai Nguyen, with a planned output of 300,000 tons of pig iron and 500,000 tons of crude steel, has been limited to pig iron production. A fertilizer plant at Bac Giang designed to produce about 200,000 tons of ammonium nitrate, using coal as a charge stock, has not yet been completed because of the war.

Table 4

Estimated Output for Selected Branches of Industry

	1965	1966	1967	1968	1969	1970	1971
<i>Million kilowatt hours</i>							
Electric power	570	520	300	350	450	510	560
<i>Thousand metric tons</i>							
Coal	4,000	3,600	2,500	2,800	2,800	2,900	3,600
Cement	660	665	200	120	200	250	345
Apatite	853	350	200	250	250	350	400
Iron ore	400	300	80	30	30	100	150
Pig iron	200	150	40	15	15	50	75

Foreign Trade and Aid

27. Since 1954, North Vietnam has incurred continuous trade deficits that began to increase rapidly after 1964. Credits and grants from the Communist countries have financed the deficits, although Hanoi has been able to maintain a small surplus in its trade with the non-Communist countries. The non-Communist countries, however, account for only a small part of total trade, while the Communist countries provide more than 95% of Hanoi's imports and take more than 70% of its exports. Table 5 shows trends

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in the trade balance but understates total imports because grant aid is not included in the data. These figures probably represent about one-half of total imports, with grant aid spread proportionately among the Communist donors.

28. Because the USSR is North Vietnam's largest trading partner, commercial patterns with the USSR—as shown in Table 6—probably typify import-export trends in both composition and fluctuations over time. Import requirements since 1965 have risen sharply as a result of war-induced demands and shortfalls in domestic production. North Vietnam depends on imports for all its supplies of petroleum, finished steel, railroad rolling stock, and vehicles, and for most of its complex machinery, metal manufactures, spare parts, industrial chemicals, and raw cotton. In addition, the strains of war and population growth have resulted in substantial demand for foodstuff imports to supplement domestic production.

29. More than one-half of Hanoi's exports by value traditionally have been agricultural products, handicrafts, and light manufactures (clothing and footwear); the remainder is made up of minerals, metals, and building materials (mainly coal, apatite, pig iron, and cement). Items such as coal, pig iron, and cement have been important sources of hard currency earnings in trade with non-Communist countries, particularly in East Asia. Coal remains Hanoi's dominant export item to Japan, although total coal exports in 1971 were still less than one-half the prewar peak. Pig iron, apatite, and cement exports also remain well below previous levels.

Table 5

North Vietnam: Direction of Trade¹

Million US \$

	1965		1966		1967		1968		1969		1970		1971	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
Total ²	180	110	250	85	365	65	415	60	435	50	385	65	360	75
Communist ³	165	87	237	62	360	55	409	47	425	37	377	49	355	53
USSR	75	31	68	25	148	21	159	18	189	17	185	18	155	24
Eastern Europe	30	26	65	17	106	12	125	13	134	10	102	15	75	19
Bulgaria	2.4	1.5	5.2	1.1	8.3	0.6	6.4	0.8	7.9	0.5	9.6	1.5	N.A.	N.A.
Czechoslovakia	9.7	7.2	13.8	5.5	17.2	3.3	18.5	4.0	16.5	3.2	13.2	5.8	18	7
East Germany	4.9	6.1	16.5	5.0	30.1	4.2	37.1	5.0	57.0	2.6	37.0	4.0	23	9
Hungary	5.3	3.7	9.7	1.5	15.3	1.1	21.4	0.9	19.7	0.7	17.2	0.7	16	1
Poland	4.0	5.1	10.5	3.7	15.8	2.5	24.1	2.5	20.8	2.8	14.5	2.3	12	2
Romania	3.4	2.1	9.0	0.2	20.1	0.1	17.9	0.1	11.7	0.2	10.0	0.2	3	Negl.
China and other	60	30	105	20	105	20	125	15	105	10	90	15	125	10
Non-Communist ⁴	15	23	13	21	6	12	7	10	10	13	9	14	7	21
Of which:														
Japan	3.9	11.5	5.7	9.7	1.8	6.7	2.4	6.1	7.3	6.0	5.0	6.3	3.7	11.6
Singapore	2.8	1.9	1.9	1.6	1.2	1.5	1.2	1.4	0.9	2.9	0.7	3.3	0.6	2.6
Hong Kong	0.4	2.7	0.3	3.0	0.2	1.1	0.2	1.2	0.3	1.8	1.3	2.6	0.3	4.8
France	2.1	3.0	2.2	2.6	0.6	0.5	1.4	0.3	0.6	0.4	0.5	0.7	0.3	0.6

1. Totals are rounded to the nearest \$5 million; because of rounding, components may not add to the totals shown.

2. Figures are compiled from official statistics of some trading partners (the USSR, Eastern Europe, and the non-Communist countries) and estimates for others (China and other Communist countries). Estimates for China are extrapolated from prewar data which indicated that China's contribution to North Vietnam's imports fluctuated roughly between 25% and 35%, and its share of Hanoi's exports averaged about 25%.

3. The import figures understate Hanoi's receipts from the Communist countries because grant aid deliveries are excluded from the official trade statistics published by the USSR and East European countries.

4. Exports to the non-Communist countries include cost, insurance, and freight (c.i.f.).

Table 6
North Vietnam: Trade with the USSR¹

	Million US \$								
	1961	1964	1965	1966	1967	1968	1969	1970	1971
Total trade	67.0	82.5	105.5	93.5	168.6	177.1	206.2	203.5	178.7
Total imports	41.3	47.7	74.9	68.2	147.7	159.2	189.3	185.0	154.8
Machinery and equipment	19.5	25.4	48.0	45.0	89.8	79.0	103.1	79.2	58.8
Of which:									
Complete plants	11.6	18.6	32.4	33.6	43.4	29.7	34.3	28.4	....
Vehicles and spare parts	2.4	2.5	5.9	1.5	21.4	18.1	28.1	21.1	15.2
Petroleum products	2.9	4.6	5.3	3.6	9.0	13.0	14.7	13.7	14.3
Metals and metal products	6.3	5.4	7.1	3.9	14.0	10.9	11.2	14.1	13.1
Ferrous metals and products	4.6	3.9	5.3	2.7	11.5	9.2	9.5	11.8	11.4
Nonferrous metals and products	1.7	1.5	1.8	1.2	2.5	1.7	1.7	2.3	1.7
Fertilizer (nitrogenous)	2.1	1.0	1.5	1.6	1.5	2.0	1.6	4.5	5.0
Tires	0.5	0.5	0.6	0.9	2.7	2.2	4.5	3.1	2.9
Textile raw materials and intermediate products	0.8	2.7	2.8	1.1	4.0	4.0	3.8	4.0	4.0
Fabrics	0.6	2.8	3.4	1.7	5.8	6.3	6.5	9.3	9.9
Of which:									
Cotton fabrics	....	1.5	2.4	1.0	4.8	5.3	5.8	7.3	7.7
Wheat flour	1.9 ²	0.1	0.1	1.1	3.9	22.4	20.8	38.5	27.8
Other	6.7	5.2	6.1	9.3	17.0	19.4	23.1	18.6	19.0
Total exports	25.7	34.8	30.6	25.3	20.9	17.9	16.9	18.5	23.9
Wooden building materials	5.7	5.1	4.6	1.0	0.6	0.3	0.3	0.2	0.1
Jute	0.8	0.3	0.4	0.3	0.1	0.2	0.1	0.3	....
Coffee	0.1	Negl.	0.8	0.4	0.2	0.1	0.2	0.1	0.3
Tea	0.4	0.4	0.4	0.5	0.8	0.7	0.5	0.9	0.7
Bananas	0.8	1.3	1.4	0.7	0.4	0.1	0.1	0.4	0.4
Alcoholic beverages	Negl.	2.1	2.2	3.9	2.9	3.4	2.6	3.8	3.3
Clothing and linens	12.0	16.7	10.5	9.2	9.0	7.9	7.8	7.9	11.3
Footwear	0.9	2.2	2.4	2.5	1.8	1.0	1.1	0.3	1.8
Fiber matting	0.5	1.0	1.1	1.4	2.0	1.4	1.5	1.4	2.7
Other	4.5	5.7	6.8	5.4	3.1	2.8	2.7	3.2	3.3

1. Official trade statistics. These figures do not include grant aid deliveries. Rubles were converted to US dollars at the official rate of 1.11 rubles to US \$1.

2. Including rye flour and other unspecified meal.

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The Economy of North Vietnam

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December 1972

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THE ECONOMY OF NORTH VIETNAM

INTRODUCTION

1. This handbook is intended to serve as a ready reference for basic economic and related information on North Vietnam. The need for such a compilation has been long recognized by specialists on North Vietnam. Such a need may be even greater as Indochina moves into the postwar era and reconstruction commences. Some of the data contained herein are unclassified and are based on information released by the North Vietnamese press and radio. However, much economic information that is routinely published by the statistical bureaus of most countries of the world is held tightly by Hanoi. Thus, data presented on agriculture and many categories of industrial production are largely estimates developed from fragmentary sources.

DISCUSSION

General

2. With a per capita gross national product (GNP) of less than \$100, North Vietnam is still predominantly a backward agricultural country. Agriculture and related activities employ about 70% of the labor force and provide about one-half of the output of all goods and services.¹ Rice is the dominant crop. Industrial production, which accounts for roughly one-fifth of national output, is about evenly divided between modern and small-scale sectors.

1. Communist accounting practices result in national output figures substantially different from those of non-Communist countries. In particular, comparability is hampered by the inclusion of material production, but the omission of government and most services.

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3. Since the advent of Communist control in 1954, the regime has followed orthodox Communist economic policies, employing state ownership of productive facilities and central planning to direct resources toward a program of planned development. In agriculture, Hanoi followed the Chinese pattern of staged transformation from private ownership to a Socialist system. By mid-1964, about 85% of the 2.9 million peasant households were organized into nearly 30,000 agricultural cooperatives that farmed about 75% of the land. Since then, the number of agricultural cooperatives has been reduced to about 22,300, comprising about 95% of the peasantry, by increasing the average size of individual cooperatives. The government plans further consolidation of cooperatives in the Red River Delta and highlands.

4. Hanoi appears to have received conflicting advice on development strategy from the USSR and the People's Republic of China since 1959. The USSR recommended a program that would maximize output of those products—minerals and tropical agricultural goods—in which North Vietnam has a relative economic advantage. Other requirements were to be met through external trade. The Chinese apparently disparaged the Soviet program as “imperialist” and advocated a greater degree of self-reliance based on well-rounded industrialization. Hanoi's first five-year plan in 1961 represented an attempt to incorporate parts of both philosophies.

5. The North Vietnamese economy developed fairly rapidly in the decade following the 1954 Geneva accords. Reconstruction of damage resulting from the French—Viet Minh conflict was largely completed by the late 1950s. Construction of a number of modern plants greatly increased industrial output. Agriculture made good progress until the start of the 1960s, when stagnation began to set in because of poor weather conditions, managerial shortcomings, and peasant disaffection.

6. Since 1965 the drain of war and the destruction from two bombing campaigns have caused declines in output, and GNP remains below its earlier peak. Farm output suffered from adverse weather in several years, manpower strains, and the war's competition for scarce resources. A large part of modern industry was rendered inoperative either from physical bomb damage or indirect effects, such as lack of raw materials, shortage of electricity, or transportation bottlenecks. To a lesser degree, these same shortages hindered production in both local and handicraft enterprises. Further disruption ensued from the government's program to evacuate the urban population and to disperse small industrial facilities to safe areas in the countryside. Production shortfalls across the board required large increases in imports, especially of foodstuffs and fertilizer, and exports fell off sharply.

7. Reconstruction from the effects of the 1965-68 bombing was essentially completed when Hanoi launched its military offensive in March 1972. There followed a renewed, even more intensive, bombing campaign coupled with the mining of North Vietnam's main ports. As a result, Hanoi is once again confronted with the need to rebuild its economy and move on toward economic development, a plan already deferred seven years.

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Population and Labor Force

8. North Vietnam's population is slightly more than 20 million persons and has been growing at about 2% per year. This relatively low rate for a less developed country is due to the large numbers of men sent to South Vietnam and to high wartime death rates since 1965. Population growth, births, and deaths for the past decade are shown in the accompanying chart, Figure 1.

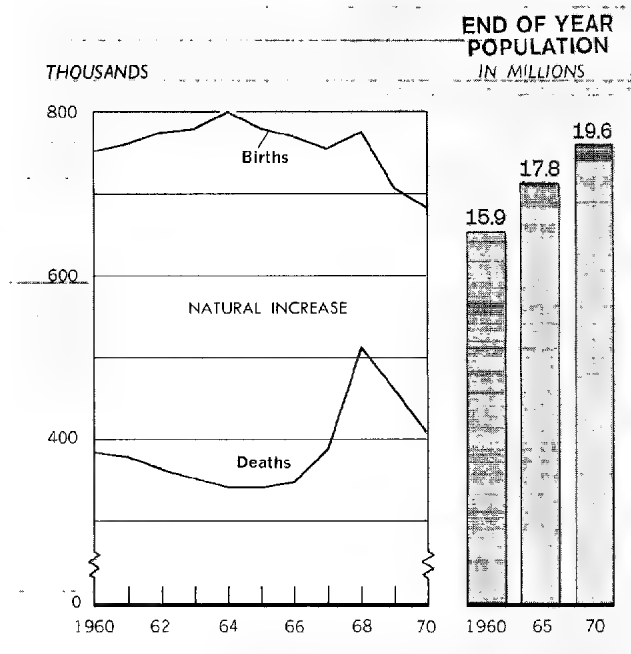
9. Overall population density in North Vietnam is about 325 persons per square mile, the highest national figure in Southeast Asia except for Singapore. The Red River Delta, parts of which have a density of some 1,500 persons per square mile, has the heaviest concentration of population. The narrow coastal strip extending to the southern border is also densely settled. Although the mountains and heavily forested northern interior regions comprise nearly two-thirds of the country, they contain barely 10% of the total population. Hanoi and Haiphong are the principal urban centers, and no more than a dozen other cities have significant populations, as shown on the map, Figure 2.

10. As in other less developed countries in Asia, a large proportion of the population is under 15 years of age. Life expectancy at birth is about 47 years. The accompanying chart compares the age-sex distribution of 1960 with that of 1970 and shows the distortion caused by the war in the prime age group. During this period the percentage of males aged 15-39 decreased from 42.6% to 36.3%, and females of the same age group decreased from 42.9% to 39.2%. All other age groups increased.

11. Manpower resources in North Vietnam have been subjected to unusual demands, but the country has managed to maintain essential economic and defense functions. Since 1965, military inductions are estimated to have withdrawn more than 1 million men from the civilian labor force, and the regime has had to mobilize the entire population in support of the war effort. This has markedly changed the civilian employment pattern and increased the workload of women, particularly in rural areas. Relocations of manpower resulted in a decline in productivity and further aggravated a longstanding shortage of skilled labor. An estimated 10 million people, or almost 50% of the total population, made up the active civilian labor force at the end of 1971, as shown in Table 1.

Estimated Population Growth

Figure 1



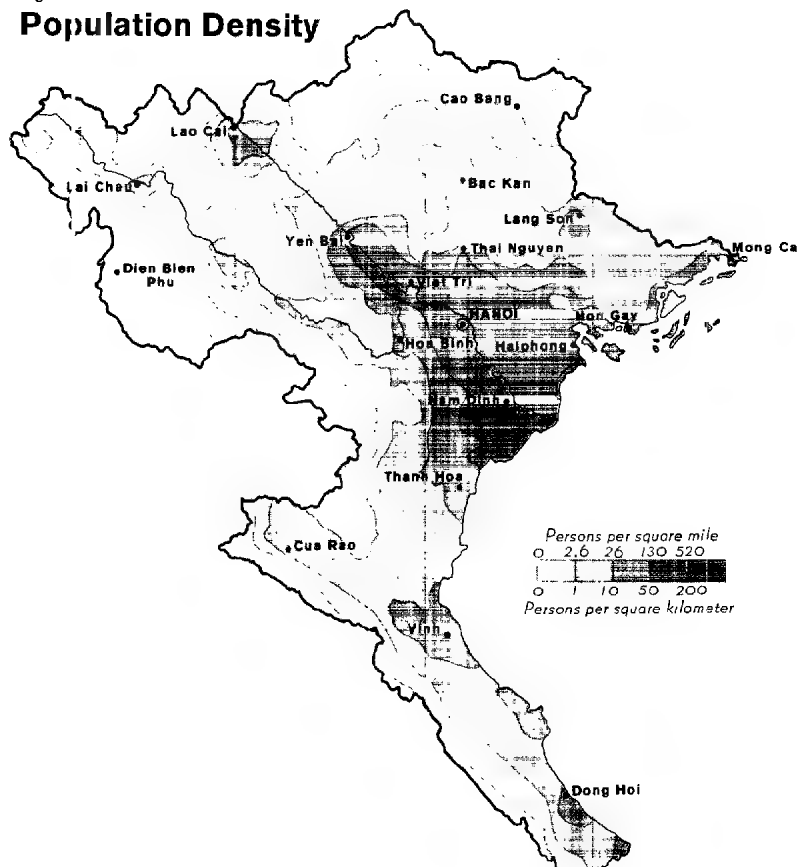
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Land and Resource Base

12. With a total land area of 61,300 square miles, North Vietnam is somewhat smaller in size than the state of Washington. Two-thirds of the country consists of rugged, sparsely-populated mountains and hills covered with dense evergreen forest interspersed with fairly extensive grassy areas. Arable land comprises only some 14% of the total, as shown in the chart, Figure 4.

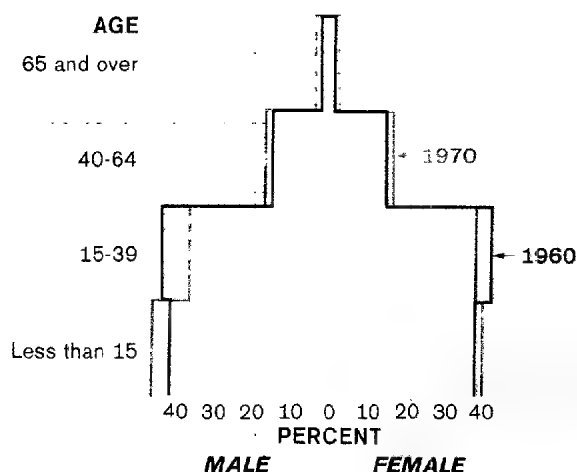
13. Agriculture is concentrated in the one-third of the country composed of the Red River Delta and the coastal plains. This area contains about 90% of the population and about 80% of the cultivated land. The Delta is a flat plain crisscrossed by rivers and drainage and irrigation canals, interwoven into a vast mosaic of rice-fields. Viet Tri, at the head of the Delta, 100 miles inland, is only 43 feet above sea level, and the average slope of the Delta to the sea is less than 6 inches per mile. In this flat environment, dikes are essential to protect the land from flooding by the rivers that cross it. Primary

Figure 2
Population Density



Population Distribution, by Age and Sex

Figure 3



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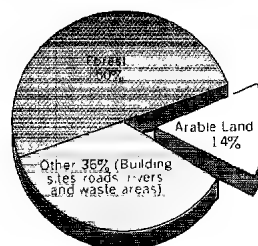
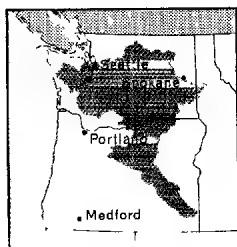
Table 1

Population and Labor Force
1 January 1972

	<i>Million Persons</i>
Total	20.1
Males	9.5
Females	10.6
Ages 15-64	11.1
Civilian labor	10.0
Students (over age 15)	0.2
Military service	0.6

Land Use, 1963

Figure 4



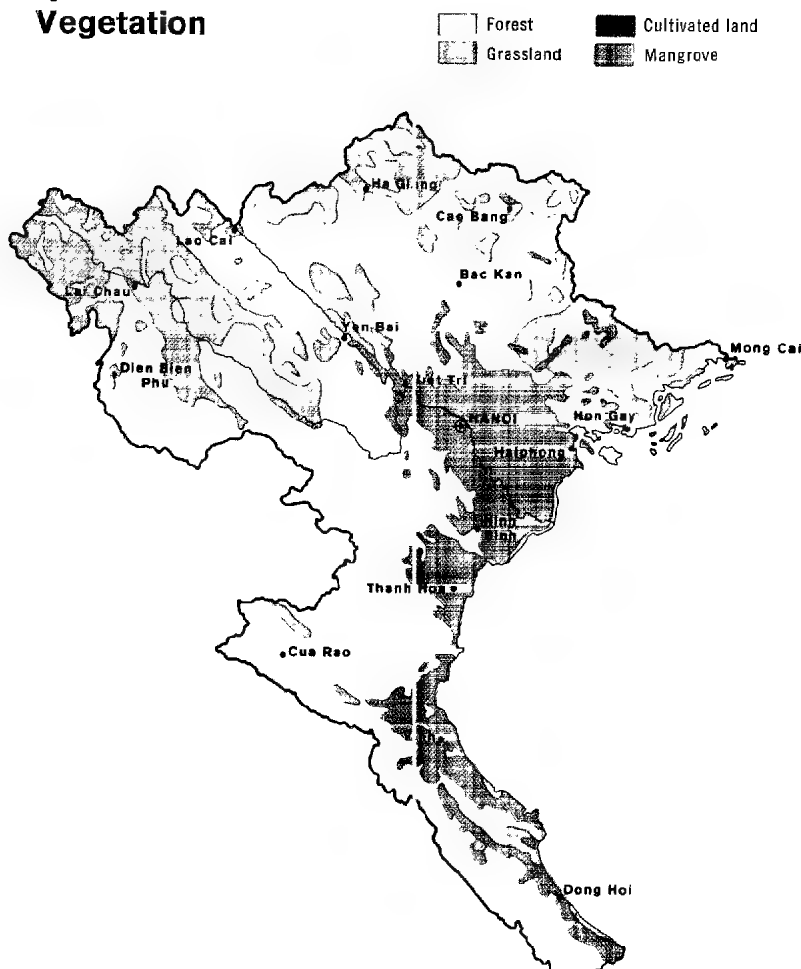
dikes protecting Hanoi and areas upstream rise up to 50 feet above the adjacent land. Secondary dike systems rising up to 40 feet are designed to contain floods if the primary dikes are breached. Poor drainage in the Delta, combined with a monsoon climate, produces some degree of flooding each summer. When monsoon rains are unusually heavy and typhoons severe, destructive flooding can occur. Floods that struck in 1971 were claimed by Hanoi to have been the worst of this century and to have inundated large areas in the Delta. (For principal vegetation types, see Figure 5.)

14. Coal is the major mineral resource and traditionally the largest single earner of foreign exchange. Proven coal reserves are about 500 million tons,² most of which lie in the Hon Gay-Cam Pha coalfields. Estimates of total possible reserves run as high as 5 billion tons. More than 95% of coal output is anthracite, however, and North Vietnam must import

2. Unless otherwise indicated, tonnages are expressed in metric tons.

Figure 5

Vegetation



most bituminous coking coal. In addition to coal, North Vietnam has such other mineral resources as iron ore deposits near Thai Nguyen with reserves—nearly all high-grade ore—estimated at about 150 million tons; apatite deposits in the Lao Cai area; and several scattered deposits of phosphorite for fertilizer production and of limestone and clay for cement production. There are also smaller deposits of chromite, tin, zinc, and tungsten, but of these only the Thanh Hoa chromite and Cao Bang tin deposits are actively mined. North Vietnam has no proved reserves of petroleum, although exploration

with Romanian assistance has been under way for several years, mainly in Thai Binh Province. Despite abundant forest resources, extraction of timber is poorly developed, and annual imports are necessary to cover domestic needs.

Transportation

15. Transportation facilities in North Vietnam—poorly developed by Western standards—are adequate to support the limited demands of the economy. Hanoi is the focal point for all types of transport. Maritime commerce is centered at the port of Haiphong. Railroads are the primary long-distance land carrier of passengers and freight, both domestically and internationally. Highways serve mainly as short-haul feeders to the railroads and to water transport and provide access to remote regions. Inland waterways, which carry primarily bulk cargoes, are the chief means of transport in the Red River Delta,

as shown on the map, Figure 6, and, on a tonnage basis, carry more cargo than any other mode. The country's small merchant marine is engaged primarily in coastal trade but only nominally in international shipping. The relative importance of various modes of transport is shown below in cargo movements for 1966, the latest year for which statistics are available:

	Million Short Tons	Percent of Total	Million Ton-Miles	Percent of Total
Railroad	3.60	16	424.6	39
Highway	8.70	39	136.9	12
Inland waterway	9.30	42	404.1	37
Coastal shipping	0.55	3	130.1	12

16. Transportation links most parts of the country but is relatively limited in extent. The railroad system totals more than 600 miles, all single track and none electrified. The highway network consists of about 8,400 miles of motorable roads, plus about 2,100 miles of seasonally motorable roads. Some 800 to 900 miles of roads have bituminous-treated surfaces, and the remaining motorable roads have crushed-stone, gravel, or earth surfaces. North Vietnam's merchant marine consists of six dry cargo ships and five tankers, most of which were built in the period of 1956-66, as shown in Table 2.

17. North Vietnam's most important international connections are by sea, through the main port of Haiphong. Seaborne shipping in 1971 accounted for roughly 90% of total imports. Oceangoing vessels could call at two secondary ports-Hon Gay and Cam Pha-both of which have engaged almost exclusively in handling coal for export. Ships must lighter at the port of Vinh, as there are no docking facilities for oceangoing vessels. There are two important rail connections with China: one at Dong Dang in the northeast and another at Lao Cai in the northwest. Some dozen highways also cross the border with China.

Selected Waterway Routes

Figure 6

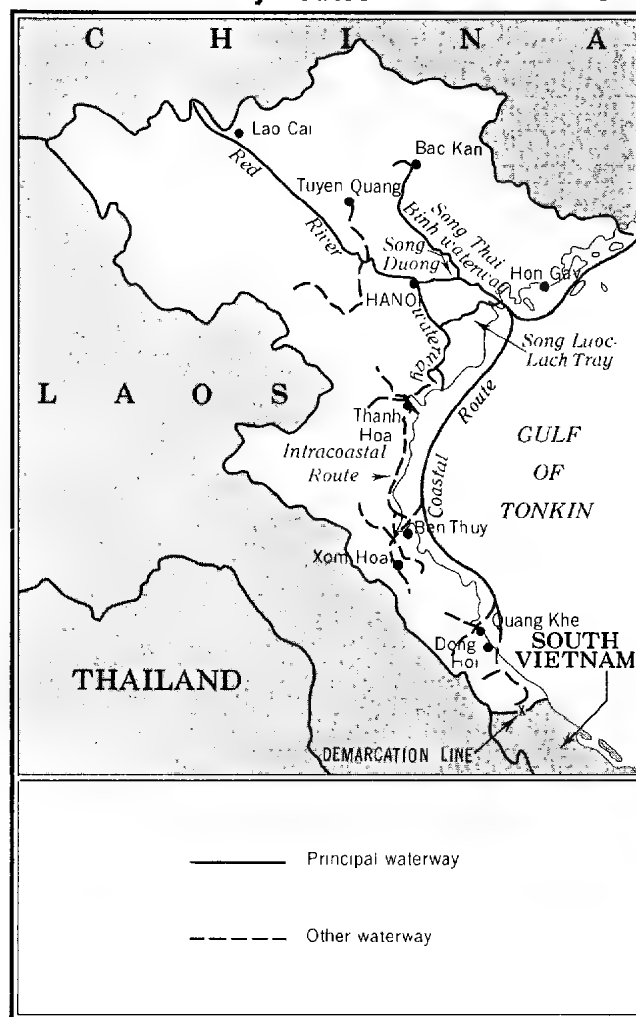


Table 2
Merchant Marine

<i>Name</i>	<i>Type</i>	<i>Gross Register Tons</i>	<i>Deadweight Tons</i>	<i>Engine Type</i>	<i>Speed (Knots)</i>	<i>Location and Date of Building</i>	<i>Call Sign</i>
Ben Thuy	Dry cargo	1,662	2,520	Diesel	11.2	Japan, 1958	82VN
Cuu Long	Tanker	1,769	1,620	Diesel	14.0	USSR, 1966	N.A.
Pei Hua	Tanker	304	300	Diesel	10.0	East Germany, 1962	N.A.
Hoa Binh	Dry cargo	610	908	Diesel	10.2	Poland, 1956	84VN
Hoang Pho	Tanker	3,327	2,300	Diesel	10.0	United States, 1943	N.A.
Huu Nghi	Dry cargo	610	908	Diesel	10.2	Poland, 1956	81VN
Thong Nhat	Dry cargo	617	840	Diesel	10.0	East Germany, 1960	86VN
Tram Giang	Tanker	3,327	2,300	Diesel	10.0	United States, 1943	N.A.
20 Thang 7	Dry cargo	1,300	1,700	Diesel	N.A.	North Vietnam, 1966	N.A.
Viet Bao	Dry cargo	2,747	3,952	Turbine/oil	12.3	East Germany, 1957	89VN
Viet Trung	Tanker	250	300	Diesel	10.0	China, 1959	N.A.

In the south, a former rail connection across the demilitarized zone (DMZ) into South Vietnam has been out of service since the early 1960s, when about 100 miles of rails were removed. However, there are several road connections built through the DMZ for military resupply purposes.

18. North Vietnam's transportation system has borne the brunt of air strikes. Damage to bridges and rail yards forced widespread use of trucks for shuttling around interdicted points, and the North Vietnamese developed considerable redundancy in road networks and river crossings, especially in the country's southern reaches. Recent mining of the ports caused a shift from predominantly seaborne shipment of imports to overland transport out of staging bases in China. A petroleum pipeline, built initially to serve military forces in Laos, was extended northward to the Chinese border during 1972.

Agriculture and Food Supply

19. Agriculture, the mainstay of North Vietnam's economy, is based primarily on rice cultivation. About 70% of cultivated acreage is in rice, 20% in secondary crops (mostly corn, sweet potatoes, and manioc), and 10% in industrial and miscellaneous crops (such as cotton, tobacco, sugar, and oilseeds). The spring harvest, which is heavily dependent on irrigation, accounts for about one-third of the yearly rice crop and for practically all other crops. The larger rice crop is harvested in the autumn. Fishing, the major source of the small amount of animal protein in the Vietnamese diet, is done by peasants in the numerous lakes and streams and by commercial fishermen in coastal waters. The annual catch is probably some 200,000 tons. Over the longer term, the regime looks to the agricultural sector not only for self-sufficiency in food but also as a source of labor and capital for furthering North Vietnam's industrialization.

20. Food production increased during the first few years of Communist rule to a peak of some 3.9 million tons in 1959.³ During much of the 1960s, however, production declined (see Table 3). Weather conditions during seven out of the last ten years was average to poor. In addition, managerial shortcomings and peasant disaffection with the cooperative system contributed to the decline in output. Since 1965, increasing amounts of food have had to be imported to maintain the average monthly foodgrain ration of 13-14 kilograms per person. By 1969, rice production had begun to recover with the introduction of high-yield rice varieties, which accounted for nearly two-thirds of the spring rice crop and 10%-15% of the autumn crop in 1971 and 1972. Agricultural production was dealt a severe setback in 1971 by late-summer floods that--according to a press statement--destroyed at least one-third of the autumn rice crop. Lingering flood damage also probably had a deleterious effect on 1972 production.

21. The war's competition for resources has limited opportunities for increased mechanization, fertilizer usage, and irrigation projects. The withdrawal of men for military service and support activities has led to a shortage of trained cadre and a shift from male to female and child farm labor. Moreover, the war has forced concentration on the production of food crops on existing farmland at the expense of industrial and export crops, fishing, and opening of new lands.

3. Measured in terms of milled rice and secondary crops expressed in milled rice equivalents.

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Table 3

Estimated Production of Food Crops

	<i>Million Metric Tons</i>		
	<i>Total</i>	<i>Rice^a</i>	<i>Secondary Crops^b</i>
1959	3.9	3.5	0.4
1960	3.2	2.8	0.4
1961	3.7	3.1	0.6
1962	3.6	3.0	0.6
1963	3.5	2.9	0.6
1964	3.7	3.0	0.7
1965	3.8	3.1	0.7
1966	3.5	2.8	0.7
1967	3.6	2.8	0.8
1968	3.3	2.6	0.7
1969	3.4	2.7	0.7
1970	3.6	3.0	0.6
1971	3.0-3.1	2.4-2.5	0.6
1972	3.6	3.0	0.6

a. Milled or polished rice.

b. Corn, sweet potatoes, and manioc expressed in milled rice equivalents.

22. North Vietnam has been relatively less successful in promoting food self-sufficiency than South Vietnam. Historically, North Vietnam's greater population pressures, severe constraints on both the quantity and quality of cultivable land, and limited amount of agricultural investment have given South Vietnam a comparative advantage in the production of rice, the major foodstuff. Not only has South Vietnam been able to increase total rice production by developing new lands—as the security situation permits—but has also increased farm productivity more rapidly than the North. Rice yields in both countries before the war were about 2 tons per hectare. Since then, the successful application of high-yield rice varieties and the development of a program of mechanization, irrigation, fertilization, and weed and pest control needed to maximize the output of the newer rice strains have pushed average yields in South Vietnam to almost 2.5 tons per hectare. In the North, on the other hand, the physical and institutional factors limiting output have been compounded by the degrading effects of years of war and have effectively halted agricultural development. Despite the recent introduction of high-yield varieties in North Vietnam, average yields have stagnated in the range of 1.8-2.0 tons per hectare.

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Industry

23. North Vietnam's industry consists of some large modern plants that are managed by the state and of small factories and handicraft enterprises that are largely managed locally with assistance and direction from state planners. Mining enterprises and the large electric power, metal, machinery, and textile plants are centrally run. Most finished consumer goods are locally produced. Handicraft workshops form an important part of local industry, typically producing textile products, metal products, or light consumer goods. Modern and local industrial output were about equal in overall value of production before US bombing greatly reduced output in the largest plants. Industrial employment is nearly 1 million, of which more than 600,000 are employed in local industry and handicrafts.

24. The prospect of rapid industrial growth from increased investment in the early 1960s has been only partly realized. According to official data, the gross value of industrial production increased about 70% from 1960 to 1964, or an average annual increase of 14%. Further growth was in the offing as a substantial portion of industrial capacity had yet to be fully assimilated into the economy. In 1965, industrial output reached a peak, although the rate of increase dropped sharply to an estimated 1% or 2%—probably the result of the US bombing program which began that year. Output then began a decline to a low in 1967 estimated at about two-thirds the 1965 level. Slow recovery began in 1968, following the partial bombing halt in March and the termination of bombing in November. By late 1971, total industrial output probably had recovered essentially to the 1965 peak.

25. Bombing during 1965-68 and again in 1972 was targeted against the modern industrial sector, including particularly the electric power industry. The impact of bombing in 1972 has again caused a sharp decline in industrial output. Recovery to pre-bombing levels of production will take several years, as was the case in the post-1968 bombing era. Table 4 presents estimated output from a few selected branches from 1965 to 1971.

26. North Vietnam's modern industry prior to the renewal of bombing in 1972 included:

- (1) electric generating capacity of some 300,000 kilowatts, with about a dozen powerplants in the Hanoi-Haiphong network making up the only integrated segment;
- (2) one cement plant at Haiphong with an annual capacity of 630,000 tons and several minor additional plants;
- (3) one superphosphate plant at Phu Tho rated at 120,000 tons per year plus three small plants producing about 50,000 tons of molten phosphorus fertilizer;
- (4) two textile mills, one in Nam Dinh and one in Hanoi, capable of producing 100 million linear meters of cotton textiles;

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(5) coal mining, with a recorded annual output of 4 million tons of anthracite coal in 1965;

(6) one chemical plant at Viet Tri producing small amounts of chlorine, caustic soda, insecticides, and polyvinyl chloride;

(7) three significant machine building plants that produce obsolete lathes, drill presses, small diesel engines, and simple agricultural machinery; and

(8) a group of electrical equipment plants capable of producing insulators, switch gear, and small electric motors and transformers.

The partially completed steel complex at Thai Nguyen, with a planned output of 300,000 tons of pig iron and 500,000 tons of crude steel, has been limited to pig iron production. A fertilizer plant at Bac Giang designed to produce about 200,000 tons of ammonium nitrate, using coal as a charge stock, has not yet been completed because of the war.

Table 4

Estimated Output for Selected Branches of Industry

	1965	1966	1967	1968	1969	1970	1971
<i>Million kilowatt hours</i>							
Electric power	570	520	300	350	450	510	560
<i>Thousand metric tons</i>							
Coal	4,000	3,600	2,500	2,800	2,800	2,900	3,600
Cement	660	665	200	120	200	250	345
Apatite	853	350	200	250	250	350	400
Iron ore	400	300	80	30	30	100	150
Pig iron	200	150	40	15	15	50	75

Foreign Trade and Aid

27. Since 1954, North Vietnam has incurred continuous trade deficits that began to increase rapidly after 1964. Credits and grants from the Communist countries have financed the deficits, although Hanoi has been able to maintain a small surplus in its trade with the non-Communist countries. The non-Communist countries, however, account for only a small part of total trade, while the Communist countries provide more than 95% of Hanoi's imports and take more than 70% of its exports. Table 5 shows trends

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in the trade balance but understates total imports because grant aid is not included in the data. These figures probably represent about one-half of total imports, with grant aid spread proportionately among the Communist donors.

28. Because the USSR is North Vietnam's largest trading partner, commercial patterns with the USSR--as shown in Table 6--probably typify import-export trends in both composition and fluctuations over time. Import requirements since 1965 have risen sharply as a result of war-induced demands and shortfalls in domestic production. North Vietnam depends on imports for all its supplies of petroleum, finished steel, railroad rolling stock, and vehicles, and for most of its complex machinery, metal manufactures, spare parts, industrial chemicals, and raw cotton. In addition, the strains of war and population growth have resulted in substantial demand for foodstuff imports to supplement domestic production.

29. More than one-half of Hanoi's exports by value traditionally have been agricultural products, handicrafts, and light manufactures (clothing and footwear); the remainder is made up of minerals, metals, and building materials (mainly coal, apatite, pig iron, and cement). Items such as coal, pig iron, and cement have been important sources of hard currency earnings in trade with non-Communist countries, particularly in East Asia. Coal remains Hanoi's dominant export item to Japan, although total coal exports in 1971 were still less than one-half the prewar peak. Pig iron, apatite, and cement exports also remain well below previous levels.

Table 5

North Vietnam: Direction of Trade¹

Million US \$

	1965		1966		1967		1968		1969		1970		1971	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
Total ²	180	110	250	85	365	65	415	60	435	50	385	65	360	75
Communist ³	165	81	231	62	360	55	409	47	425	37	377	49	355	53
USSR	75	31	68	25	148	21	159	18	189	17	185	18	155	24
Eastern Europe	30	26	65	17	106	12	125	13	134	10	102	15	75	19
Bulgaria	2.4	1.5	5.2	1.1	8.3	0.6	6.4	0.8	7.9	0.5	9.6	1.5	N.A.	N.A.
Czechoslovakia	9.7	7.2	13.8	5.5	17.2	3.3	18.5	4.0	16.5	3.2	13.2	5.8	18	7
East Germany	4.9	6.1	16.5	5.0	30.1	4.2	37.1	5.0	57.0	2.6	37.0	4.0	23	9
Hungary	5.3	3.7	9.7	1.5	15.3	1.1	21.4	0.9	19.7	0.7	17.2	0.7	16	1
Poland	4.0	5.1	10.5	3.7	15.8	2.5	24.1	2.5	20.8	2.8	14.5	2.3	12	2
Romania	3.4	2.1	9.0	0.2	20.1	0.1	17.9	0.1	11.7	0.2	10.0	0.2	3	Negl.
China and other	60	30	105	20	105	20	125	15	105	10	90	15	125	10
Non-Communist ⁴	15	23	13	21	6	12	7	10	10	13	9	14	7	21
Of which:														
Japan	3.9	11.5	5.7	9.7	1.8	6.7	2.4	6.1	7.3	6.0	5.0	6.3	3.7	11.6
Singapore	2.8	1.9	1.9	1.6	1.2	1.5	1.2	1.4	0.9	2.9	0.7	3.3	0.6	2.6
Hong Kong	0.4	2.7	0.3	3.0	0.2	1.1	0.2	1.2	0.3	1.8	1.3	2.6	0.3	4.8
France	2.1	3.0	2.2	2.6	0.6	0.5	1.4	0.3	0.6	0.4	0.5	0.7	0.3	0.6

1. Totals are rounded to the nearest \$5 million; because of rounding, components may not add to the totals shown.

2. Figures are compiled from official statistics of some trading partners (the USSR, Eastern Europe, and the non-Communist countries) and estimates for others (China and other Communist countries). Estimates for China are extrapolated from prewar data which indicated that China's contribution to North Vietnam's imports fluctuated roughly between 25% and 35%, and its share of Hanoi's exports averaged about 25%.

3. The import figures understate Hanoi's receipts from the Communist countries because grant aid deliveries are excluded from the official trade statistics published by the USSR and East European countries.

4. Exports to the non-Communist countries include cost, insurance, and freight (c.i.f.).

Table 6
North Vietnam: Trade with the USSR¹

	Million US \$								
	1961	1964	1965	1966	1967	1968	1969	1970	1971
Total trade	67.0	82.5	105.5	93.5	168.6	177.1	206.2	203.5	178.7
Total imports	41.3	47.7	74.9	68.2	147.7	159.2	189.3	185.0	154.8
Machinery and equipment	19.5	25.4	48.0	45.0	89.8	79.0	103.1	79.2	58.8
Of which:									
Complete plants	11.6	18.6	32.4	33.6	43.4	29.7	34.3	28.4	....
Vehicles and spare parts	2.4	2.5	5.9	1.5	21.4	18.1	28.1	21.1	15.2
Petroleum products	2.9	4.6	5.3	3.6	9.0	13.0	14.7	13.7	14.3
Metals and metal products	6.3	5.4	7.1	3.9	14.0	10.9	11.2	14.1	13.1
Ferrous metals and products	4.6	3.9	5.3	2.7	11.5	9.2	9.5	11.8	11.4
Nonferrous metals and products	1.7	1.5	1.8	1.2	2.5	1.7	1.7	2.3	1.7
Fertilizer (nitrogenous)	2.1	1.0	1.5	1.6	1.5	2.0	1.6	4.5	5.0
Tires	0.5	0.5	0.6	0.9	2.7	2.2	4.5	3.1	2.9
Textile raw materials and intermediate products	0.8	2.7	2.8	1.1	4.0	4.0	3.8	4.0	4.0
Fabrics	0.6	2.8	3.4	1.7	5.8	6.3	6.5	9.3	9.9
Of which:									
Cotton fabrics	....	1.5	2.4	1.0	4.8	5.3	5.8	7.3	7.7
Wheat flour	1.9 ²	0.1	0.1	1.1	3.9	22.4	20.8	38.5	27.8
Other	6.7	5.2	6.1	9.3	17.0	19.4	23.1	18.6	19.0
Total exports	25.7	34.8	30.6	25.3	20.9	17.9	16.9	18.5	23.9
Wooden building materials	5.7	5.1	4.6	1.0	0.6	0.3	0.3	0.2	0.1
Jute	0.8	0.3	0.4	0.3	0.1	0.2	0.1	0.3	....
Coffee	0.1	Negl.	0.8	0.4	0.2	0.1	0.2	0.1	0.3
Tea	0.4	0.4	0.4	0.5	0.8	0.7	0.5	0.9	0.7
Bananas	0.8	1.3	1.4	0.7	0.4	0.1	0.1	0.4	0.4
Alcoholic beverages	Negl.	2.1	2.2	3.9	2.9	3.4	2.6	3.8	3.3
Clothing and linens	12.0	16.7	10.5	9.2	9.0	7.9	7.8	7.9	11.3
Footwear	0.9	2.2	2.4	2.5	1.8	1.0	1.1	0.3	1.8
Fiber matting	0.5	1.0	1.1	1.4	2.0	1.4	1.5	1.4	2.7
Other	4.5	5.7	6.8	5.4	3.1	2.8	2.7	3.2	3.3

1. Official trade statistics. These figures do not include grant aid deliveries. Rubles were converted to US dollars at the official rate of 1.11 rubles to US \$1.

2. Including rye flour and other unspecified meal.

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